OCTOBER 1951

FIREMEN

FIFTY-SIXTH YEAR · NATIONAL FIRE PROTECTION ASSOCIATION

VOLUME 19, NUMBER 10, COPYRIGHT 1951 NATIONAL FIRE PROTECTION ASSOCIATION PRINTED IN U. S. A.

"Amazing performance!"

—says Bay City Fire Chief

Bay City does it again . . . makes second remarkable stop of the summer with John Bean Fog Fire Fighter

CHIEF TRUDELL inspects charred timbers in the attic of the depot, indicating deep-seated nature of fire.

CREW OF THE Bay City Bean High-Pressure Fog Unit (left to right), Gene McLellan, Capt. Martin Kaiden, Chief Trudell, Freeman Plessner, Clifford Goddard.

TWICE in four months, Fire Chief Joseph L. Trudell and Bay City firemen had reason to be "amazed" at the fast action and efficiency of their John Bean High-Pressure Unit.

In April, a major fire at the Electric Auto-Lite plant was knocked down in "a matter of seconds" with Bean High-Pressure Fog.

On August 17, firemen, led by Assistant Fire Chief Jacob H. Hohmann, Jr., were called to fight a deep-seated 2-alarm fire, started by youthful prowlers in an unused Chesapeake & Ohio depot. Roaring flames filled the open attic of the rambling 15,000-sq.-ft. structure when the Bean High-Pressure Unit reached the scene. Two high-pressure fog lines, *using water from the Unit's own supply,* attacked the blaze through a second-story window. By the time supporting pumper units had water in their lines, the high-pressure fog had the fire out.

Less than 300 gallons of water were used and no water damage was found in the building. Total damage to the building was less than $6,000.

Yes, an "amazing performance," but performance *you* too can have with modern John Bean High-Pressure Fog. Write today for information.

Sensational John Bean Features!

- Goes into action immediately because it carries own water supply
- Clears the way for close-up, inside work with protective screen of flame-smothering high-pressure fog
- Puts fires out faster because Bean High-Pressure Fog outperforms solid streams 10 to 1
- Practically eliminates water damage by extinguishing fires quickly and efficiently

BAY CITY, Michigan, High-Pressure Unit carries two guns of 30-g.p.m. each, 850 pounds pump pressure. Delivered complete with all accessories.

BEAN *Original* HIGH-PRESSURE FOG FIRE FIGHTER

CAN BE MOUNTED ON MOST STANDARD TRUCK CHASSIS

FOOD MACHINERY AND CHEMICAL CORPORATION

JOHN BEAN DIVISION, DEPT. 127, LANSING 4, MICH. • JOHN BEAN DIVISION (WESTERN), 426 JULIAN ST., SAN JOSE, CALIF.

BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

Chief H. L. Baldwin, Kansas City, Can Tell You!

You never can tell—when you're groping your way through smoke-filled rooms—when you'll bump your head on a hot electrical wire or charged metal. What happens then depends a lot on what kind of a hat you are wearing . . . as Chief H. L. Baldwin can tell you.

"I was wearing a hat that WASN'T a non-conductor and came in contact with a "hot" wire. It felt like I tore my head off. I got rid of that helmet in a hurry.

"We've since had numerous cases of fire-fighters coming in contact with electric wires while wearing non-conducting helmets. There were no resulting shocks."

You're doubly protected when you wear an M.S.A. Streamlined Fireman's Helmet. Its high dielectric strength safeguards against electrical hazards—and because the laminated bakelite is non-absorbent, this protection isn't affected by moisture conditions. The one-piece, high pressure molded construction takes bumps and blows without passing them on. (Many reports on record such as: a brick fell 45 feet and hit an M.S.A. helmet. No injury to the wearer—only a slight scratch on the helmet.) And finally, the streamlined design has eye appeal, and the rubber-cushioned lining provides greater wearing comfort. Easily zipped-in winter lining assures all-weather comfort. Ask for Bulletin DX-8, for full details.

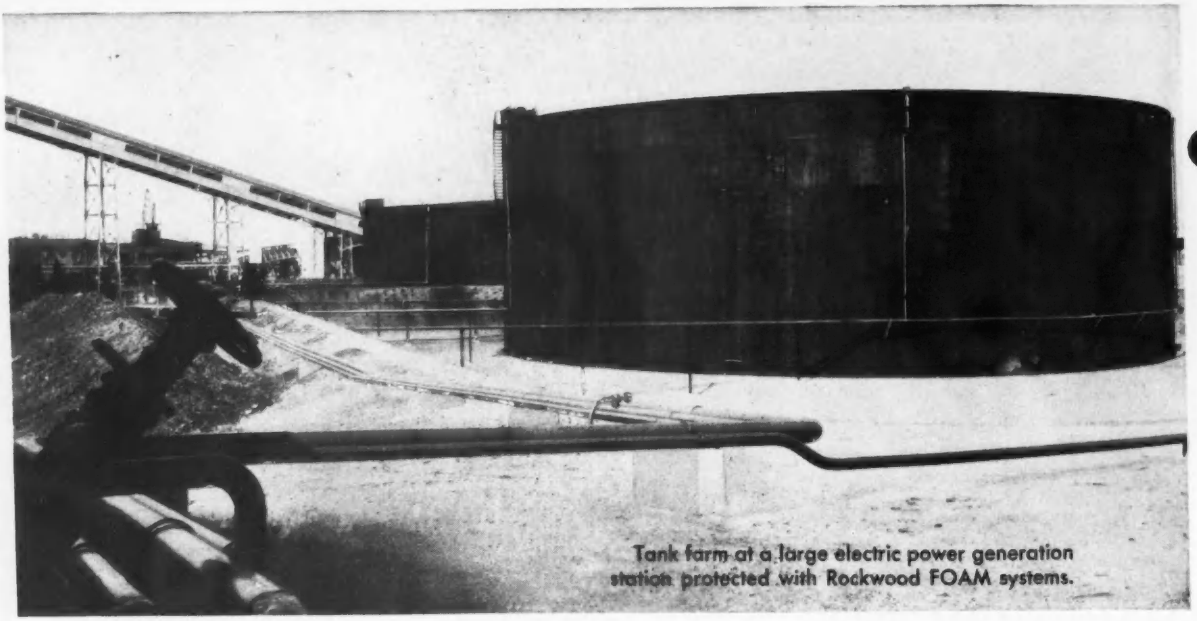
Chief H. L. Baldwin wearing his shock-proof M.S.A. Helmet. The Kansas City, Mo., department has standardized on this proved head protection.

MINE SAFETY APPLIANCES COMPANY
BRADDOCK, THOMAS AND MEADE STS., PITTSBURGH 8, PA.

At Your Service
54 BRANCH OFFICES IN THE UNITED STATES AND CANADA.

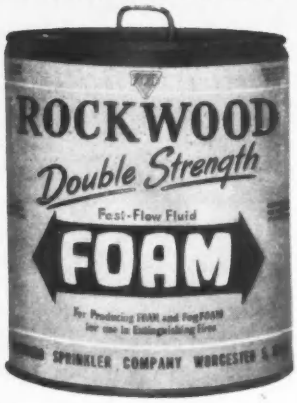
Call the M.S.A. man on your every safety problem . . . his job is to help you

MSA
SAFETY EQUIPMENT HEADQUARTERS

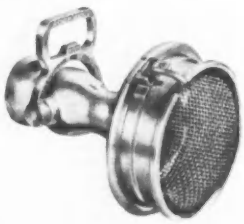


Tank farm at a large electric power generation station protected with Rockwood FOAM systems.

better FIRE PROTECTION begins with ROCKWOOD PRODUCTS



New *Lightweight* type FFF Rockwood FogFOAM Nozzle. Discharges FogFOAM — solid FOAM stream or High Velocity WaterFOG. →



Rockwood FOAM Eductor can be attached between discharge of fire truck and hose line or between hydrant and hose line or between two lengths of hose.

Rockwood Lightweight "FF" Extension unit with SG-60 WaterFOG Nozzle attached. Discharges FogFOAM, solid FOAM stream, high velocity WaterFOG, solid stream or low velocity WaterFOG.

You'll be surprised at all the places in your refinery — plant or city where Rockwood fire fighting products can help you *cut fire losses.*

Year after year Rockwood engineers stride ahead giving fire fighters spectacular new developments to combat serious fires in highly volatile flammable liquids and materials. One of the most recent developments has been the new Rockwood *Double strength* FOAM liquid. This new type extinguishing agent is a *fast-flowing* FOAM that covers burning surfaces faster — completely seals off combustible vapors — flows freely at sub-zero temperatures (-15°F) and is easier for firemen to handle. It will cling to smooth, vertical or curved surfaces and has many advantages over ordinary FOAM liquids or powder foams.

New Rockwood proportioning equipment, FOAM and Fog-FOAM Nozzles enables fire fighters to apply Rockwood FOAM Liquid and wetting agent more efficiently to most fires.

Ask your fire equipment distributor, today for complete data and prices on Rockwood's growing family of modern fire fighting products.

ROCKWOOD SPRINKLER CO.
88 HARLOW STREET, WORCESTER 5, MASS.

PORTABLE FIRE PROTECTION DIV.

ROCKWOOD

Firemen

Volume 18 — Number 10

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NATIONAL FIRE PROTECTION ASSOCIATION

A VOLUNTARY NON-PROFIT ORGANIZATION
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Cover Picture

This month's cover shows fire fighters attempting to control the fire that destroyed the State Armory building at Binghamton, New York, on September 3. One fire fighter was killed and seven others were injured as the building, which housed the New York State Institute of Applied Arts and Sciences, was gutted. Loss was estimated as exceeding $750,000. (*Photo by Charles F. Teed, Binghamton Sun.*)

From the Fire Prevention Program of the International Association of Fire Chiefs — Chamber of Commerce and Junior Chamber of Commerce. Fire Prevention Week. Kiwanis Club month and 20-30 Clubs.

Engine No. 21 station of Memphis, Tennessee, Fire Department, headed by Chief John C. Klinck.

Residential Fire Houses

Time and again fire departments have had difficulty in obtaining suitable sites for fire department stations to protect residential areas due to objections by property owners that a fire house would depreciate nearby property. On occasion, zoning ordinances have been invoked to keep fire stations out of such areas no matter how badly needed. That modern fire stations can be designed to conform to the architectural standards of the neighborhood that they serve has been demonstrated again by the new Engine No. 21 station at Memphis, Tennessee. Located on a high class residential street, this fire house has been designed to resemble neighboring private residences with only an attractive wrought iron sign indicating that it is a municipal fire department house.

Apparatus is housed in an attached garage at grade level at the rear of the building, just as adjacent residents house their private automobiles. In fact, there is nothing about this station significantly different from the adjoining residences. The lot is of ample size so that house bells and alarm signals cannot disturb owners of immediately adjacent property. True, residents of any neighborhood may hear fire sirens at night but the siren noise is directed ahead of the apparatus and away from the fire station neighborhood. As sirens are not used when returning to quarters neighbors seldom notice trucks coming back to the station. In any event, it is probable that, on the average, a typical residential fire company such as Engine No. 21 would not respond during nighttime much more than once a week. Once accustomed to having the fire station nearby, residents would have more assurance of safety because of the immediate protection afforded.

Rear view of Engine No. 21 station, Memphis, showing apparatus garage and driveway by which apparatus reaches street.

Fire Company Inspections of the St. Louis Fire Department

by Fire Marshal Walter P. Bergman (member NFPA)

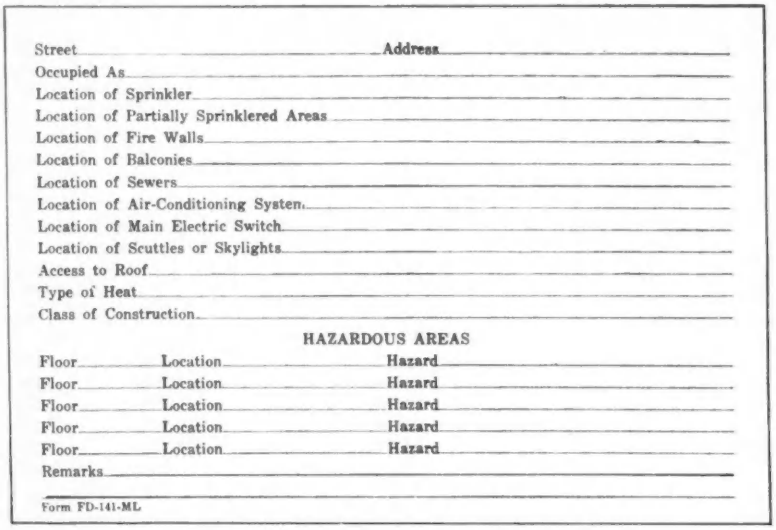
FIRE prevention is not something apart from the work and interest of St. Louis fire fighters. Fire company officers are carrying out pre-fire fighting surveys of the various properties in the districts they protect. These surveys are made in close cooperation with the Fire Prevention Bureau, but their prime purpose is to enable each fire fighting unit to do a better job.

A typical report by a fire company captain of an inspection of a mercantile building consists of about two typewritten pages, plus a diagram showing data that would help the department to locate and fight a fire. (See diagram on next page.)

The report, filed according to street location and name of property, first gives a brief summary of location, construction, and occupancy of the property, and indicates what building areas are sprinklered, if any. Next comes a heading "ENTRY" giving data on entrances, watch service, location of call bells, and means of access to various sections of the structure. A section headed "VENTILATION" tells how the building can best be ventilated and also cautions against methods of ventilation that might endanger exposures. Under "REMARKS," various private fire protection facilities such as automatic sprinklers and private fire alarm devices are recorded. "SPECIAL REMARKS" detail protective equipment no longer in service. There is also information on first aid extinguishers, domestic heat, gas shut offs, and electric service switches. The heading "EXPOSURES" covers all vertical and horizontal exposures and protection against exposure such as fire door installations and wired glass. The final section of the report covers "VIOLATIONS & RECOMMENDATIONS," including such items as fire doors wedged open, housekeeping violations, and inoperative fire equipment. Such items are referred to the Fire Prevention Bureau.

(*Please turn to page 27*)

Chief Walter P. Bergman, St. Louis Fire Marshal has had a distinguished career as a St. Louis fire fighter during the past twenty years. He served with Engine Co. 1 until severely injured at a warehouse fire. Next he was aide to the Chief of Department until promoted to lieutenant. In 1943 he became captain of No. 1 Rescue Squad. The next year he was promoted to Chief Instructor of the Department. When Fire Marshal Walter H. Kammann became Chief of Department in 1949, Chief Bergman was selected from the eligible list of battalion chiefs to fill the vacancy of Fire Marshal where he is doing an excellent job in securing the interest and cooperation of the entire fire fighting force in the Department's fire prevention program.

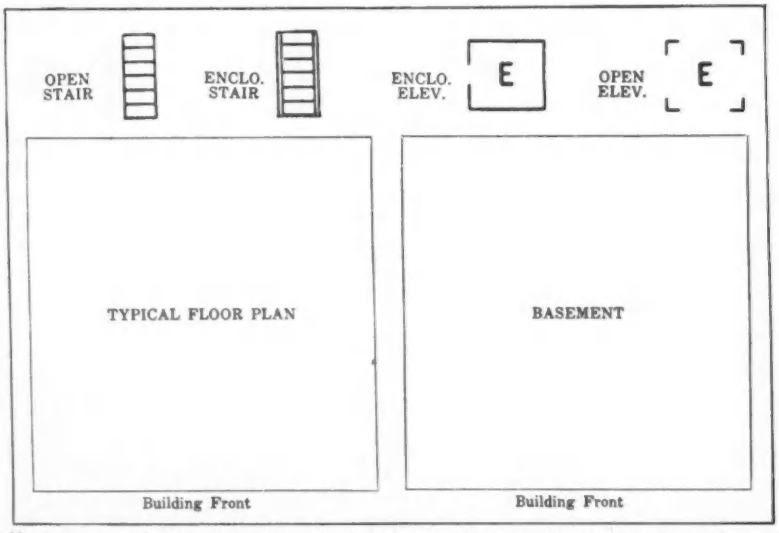


Street _____ Address _____
Occupied As _____
Location of Sprinkler _____
Location of Partially Sprinklered Areas _____
Location of Fire Walls _____
Location of Balconies _____
Location of Sewers _____
Location of Air-Conditioning System _____
Location of Main Electric Switch _____
Location of Scuttles or Skylights _____
Access to Roof _____
Type of Heat _____
Class of Construction _____

HAZARDOUS AREAS

Floor _____ Location _____ Hazard _____
Floor _____ Location _____ Hazard _____
Floor _____ Location _____ Hazard _____
Floor _____ Location _____ Hazard _____
Floor _____ Location _____ Hazard _____
Remarks _____

Form FD-141-ML



Above is a reproduction of both sides of a 4 x 6-in. record card used by the St. Louis Fire Department to list some of the pertinent data obtained in fire company inspections. These cards can be carried by the fire companies and chief officers to fires in their districts. The cards give basement and above-ground floor plans, vertical openings, means of entrance, and other information needed by fire fighters. Hazardous areas on various floors are specifically noted.

St. Louis Fire Department — Fire Prevention Bureau

Hour ..... M. Date ..... 19 .....

Building located at ..... Stories ..... Occupied as .....

VIOLATION and Floor Found On

Aisles, insufficient or blocked .....
Ashes, in wooden boxes, etc. .....
Baled paper, storing too much of .....
Door or windows obstructed .....
No hood or vent over ranges, etc. .....
No metal cans for oily rags, etc. .....
No metal bins for excelsior, etc. .....
Ovens, etc., not properly protected .....
Partitions, too near stove, etc. .....
Rubbish in yard or building .....
Rubber hose on gas appliances .....
Smoke pipes, too near woodwork .....
Steam pipes, too near woodwork or stock .....
Stairways, blocked or nailed over .....
Ventilators full of grease .....
Windows to fire escapes, out of order .....
Stock piled too close to sprinkler .....
Excessive dust on elevator guides .....
Are sewers marked? .....
Location of sewers .....
Are exits properly marked? .....
Location of balconies if any .....
Did you examine behind machines, ranges, benches, under stairs, dressing rooms, lockers, etc., for fire hazards? .....
Are the bottom of elevator shafts clean? .....
Is boiler room clean? .....
Do they use paper shades on electric lights, or tie up wires on nails, pipes, etc? .....
Do they use any substance other than flammable liquids which would be detrimental to firemen in case of fire? .....
If so, what is it? .....
.....
.....
.....
What amount? .....
.....
Where is it stored? .....
.....
Location of air conditioning system, if any, ...
.....
Type of refrigerant used? ..... Amount .....
.....

FM-117 Rev. ML 4/51

Owned by ..... Address .....
Occupant .....

REPORT IN FOLLOWING

Is building sprinklered? ..... No. of systems ..... Location of system .....
Is building partially sprinklered? ..... Location .....
City Main ☐ Pressure Tank ☐ Gravity Tank ☐ Wet ☐ Dry ☐
Location of street valve ..... Shut-off valve .....
Do systems interlock? ..... Location of F.D. connections .....
Type of thread ..... Condition of thread .....
Is system supervised? Potter ☐ ADT ☐ No ☐ Local ..... Watchman Service .....
What other types of alarms, if any? .....
Has building outside standpipe? ..... Number ..... Condition .....
Has building inside standpipe? ..... Number ..... Size of connection .....
Is hose attached? ..... Do Fire Dept. couplings fit? .....
Water supply — F.D. connection ☐ Gravity ☐ Pressure ☐ Auxiliary pump ☐
Location of Fire Dept. connection for inside standpipe .....
Have they any other fire appliances? ..... Type & Amount ..... Date .....
Exposures — Describe .....
Has building fire walls? ..... Location .....
Has building fire doors? ..... Are they operable ..... Have they fusible links .....
Is elevator enclosed? ..... Do gates & doors operate? ..... Is enclosure fire resistive? .....
Are stairways enclosed? ..... Is enclosure fire resistive? .....
Are floors overstocked? ..... What floors? .....
Has building exterior fire escape? ..... Location ..... Condition .....
Condition of roof scuttles or skylights ..... Location .....
Describe access to roof .....
Are all openings in floors protected? .....
What kind of heat used? Central ☐ Gas ☐ Oil ☐ Coal ☐
Condition of heating plant ..... If bad, how and where? .....
Condition of electric wiring .....
Location of main switch .....
Do they handle inflammable liquids? ..... How and where stored .....
Spray booths Yes ☐ No ☐ Location .....
Dip tanks Yes ☐ No ☐ Location .....

Name of Occupant and Floor Occupied

..... on the ..... floor, Business .....
..... on the ..... floor, Business .....
..... on the ..... floor, Business .....
..... on the ..... floor, Business .....
..... on the ..... floor, Business .....

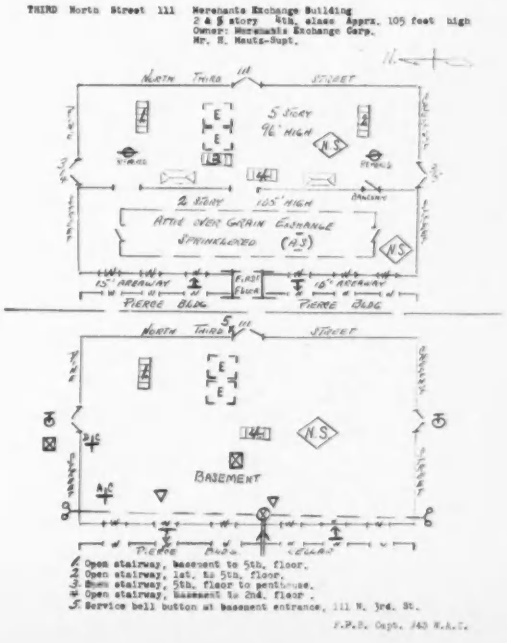
Regarding inspection interviewed .....
Class of construction of building (1) (2) (3) (4) (5) (6) Condition .....
Location of exits .....

Signed ..... Dist. No. .....
Inspector.

Above: Inspection report form of the St. Louis Fire Prevention Bureau reduced from its original 8½ x 11-in. size. On the back are floor plan diagrams similar to that on the previous page, an entry regarding hazardous areas, and a place for remarks. Below at right: a typical inspection plan prepared by a fire company captain to accompany an inspection report. The original is done in two colors (red and blue), 8½ x 11-in. size. Exits and points of access, and fire equipment are shown in red; the building diagram in blue. Standard plan symbols are given below, (left).

SYMBOLS
FIRE FIGHTING SURVEY

- (A.S.) COMPLETELY SPRINKLERED
- (A.S.) PARTLY SPRINKLERED
- N.S. NOT SPRINKLERED — LOCATION OF STREET VALVE
- LOCATION OF SPRINKLER SHUTOFF VALVE — DRAIN & SCUPPERS
- LOCATION OF INSIDE OR OUTSIDE STANDPIPE
- LOCATION OF SIAMESE SPRINKLER CONNECTION
- LOCATION OF SIAMESE STANDPIPE CONNECTION
- LOCATION OF MAIN ELECTRIC SWITCH
- LOCATION OF GAS SHUTOFFS, INSIDE & OUTSIDE
- WINDOW. W.G.-WIRE GLASS O.G.-ORDINARY GLASS
- F.D. DOOR W.D.-WOOD DOOR F.D.-FIRE DOOR A.F.D.-AUTOMATIC FIRE DOOR.
- SKYLIGHT — AMMONIA SHUT-OFF
- OUTSIDE FIRE ESCAPE — EXPOSURE
- OPEN STAIRWAY — ENCLOSED STAIRWAY
- E OPEN ELEVATOR, DUMBWAITER, UTILITY SHAFT
- E ENCLOSED ELEVATOR, DUMBWAITER, UTILITY SHAFT
- ALL GLASS (HERCULITE) (TUFLEX) DOOR

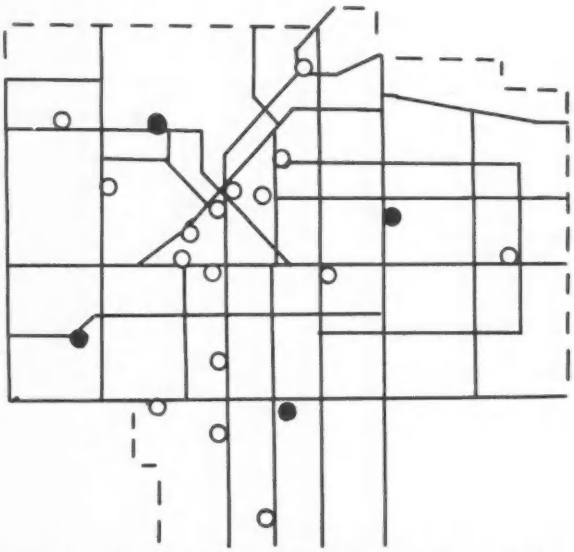


Auxiliary Trucks for Grass and Brush Fires

AS fire officials are well aware, in most communities the vast majority of fire calls are for relatively trivial incidents such as grass, brush and weed fires. These cannot be neglected because they may extend and endanger improved property. At certain seasons alarms for outdoor fires come with such frequency that even large cities find themselves nearly depleted of heavy duty fire fighting equipment needed to protect the community against the possibility of serious building fires. The NFPA Department of Fire Record estimates based upon reports from most city fire departments show that American fire departments answer more than 200,000 calls for outdoor fires each year. Many of these calls come on dry windy days of extreme fire danger during the Autumn and Spring. It is not uncommon to have to move fire companies from high value districts into suburban areas to meet the threat of outdoor fires.

Most of these fires are small and can be handled readily by properly designed grass and brush fire trucks with great saving in wear of the regular apparatus and with better protection to the city. Usually the brush fire trucks are manned as needed by details from existing companies although it may be desirable to assign a regular driver to the apparatus.

Grass fire trucks should not replace any standard apparatus but are very useful supplemental units just as in the old horse-drawn days the chemical engine never supplanted but merely complemented the steam pumper. Basically, the grass fire truck consists of a small commercial truck chassis carrying 300 to 600 gallons of water (depending upon chassis selected). Larger tanks have proven disadvantageous for service that requires mobility and ability to negotiate back lanes and uneven terrain although heavy duty tankers have a place in rural and forest fire service.



Plan of a typical city showing existing fire stations and suggesting how four auxiliary booster trucks might be stationed (black dots) to handle a large part of the minor nuisance calls that plague many fire departments. These trucks are so placed that in the event one of the units is out on a call, its district can be readily covered by other auxiliaries. Some cities might want one or more such trucks in each battalion district.

New grass and brush fire truck of the Raytown Fire Protection District headed by Chief George I. Smith (member NFPA) and protecting 15,000 people and 27 square miles immediately east of Kansas City, Missouri. The unit was constructed on a F-4 Ford by the Tower Fire Apparatus Company of Freeburg, Illinois. It has dual rear wheels with mud and snow tires and a 300-gallon water tank. Its GF-250 Barton American front mount pump will produce 120 lbs. pressure when driving forward in first gear on grass fires. The pump has special outlets for garden hose, allowing the operator to protect the equipment with short length of garden hose when other lines are out. It has a gated 2½-in. inlet for supply and two 1½-in. outlet valves plus 200 ft. booster reel. Four back-pack extinguishers are mounted on running boards and an outlet valve is provided from the booster tank to refill these extinguishers. The divided hose body carries 500 ft. 1½-in. hose and 300 ft. 2½-in. hose used to supply the pump or tank from a hydrant. Two lengths of 2½-in. hard suction are carried and a valve is provided to permit refilling of booster tank while drafting. A 10-ft. folding ladder and a 20-ft. extension ladder are provided for use at building fires. A 15-lb. CO_2 and two 2½-gallon foam extinguishers are mounted on the running boards. The truck is equipped with 2-way radio. Chief Smith reports that it is very useful on automobile as well as on grass and brush fires.

Fire fighting equipment should include a good booster pump, a supply of 1½-in. c.r.l. hose, one or two lines of booster hose or a supply of 1-in. c.r.l. forestry hose, back-pack extinguishers to head off any fire that might be out of immediate reach of hose lines, plus some of the usual minor equipment for pumpers.

Where regular pumpers lack large booster tanks, many departments find that the booster tank on the grass fire truck supplying one or two 1½-in. fog nozzles does an excellent job on average building fires while big lines are being laid. Further, when equipped with short ladders and basic fire tools, the unit provides an excellent reserve piece useful as a "spark chaser" during major fires.

Even the smallest departments should find such auxiliary booster trucks very useful, while in a larger department three or four such units strategically placed and under radio control could relieve heavy duty apparatus of hundreds of calls, greatly reducing chances of accidents as well as cutting maintenance costs.

Such units can be assigned to patrol for certain fire hazards, check up on illegal burning in the open or could be detailed to burn over vacant lots where this is departmental policy. One of the auxiliary trucks could be stationed in outlying areas remote from fire stations but subject to numerous grass and brush fire calls during periods when the Weather Bureau reports high fire danger.

When the small truck does arrive first at a building blaze, it would be equipped to radio for help while holding flames in check with its 1½-in. fog lines.

Your Municipality Can Win The

Fire Prevention Week Contest

EVERY year the National Fire Protection Association sponsors a Fire Prevention Week Contest through the NFPA Committee on Fire Prevention and Clean-up Campaign. The purpose of the Contest is to stimulate the promotion of Fire Prevention Week and to encourage entrants to use Fire Prevention Week as a means for launching year-round fire prevention campaigns in their communities.

The spirit of competition is inherent in the fire service. The matching of skills and accomplishments among members of a department, among companies within a department, or among departments in a community, not only brings a token of acclaim for the victor, but also helps to raise the standards of fire department activities.

This competitive spirit has enlivened the Fire Prevention Week Contest. Fire departments and other members of the fire service have taken the opportunity to gain international recognition for their municipalities by devoting their efforts towards winning a prize in the contest. As a result, the contest is not only stimulated by the increasing number of entrants each year, but the overall effectiveness of fire prevention activities is strengthened through the competition.

ANY municipality, government agency, or industrial installation, may enter the Contest. All that is necessary is that the scope of Fire Prevention Week Activities be effectively reported to Melvin R. Freeman, Secretary, Fire Prevention and Clean-up Campaign Committee, 60 Batterymarch Street, Boston 10, Massachusetts, before midnight November 30, 1951. Entry blanks and further information about the contest may be obtained by writing to the same address.

Upon receiving an entry blank, the fire officer, or other member of the fire service, who is reporting the accomplishments in his community should fill out the answers to all questions completely. Then as supplementary information further description of activities may be presented in the form of a scrapbook. An 8½ x 11 in. loose-leaf binder with separators for each item in the report helps to make a good presentation. The separators should follow the numbering in the reporting form and it is advisable to place a tab or title on each separator. Each section may include reports, letters of explanation, photographs, newspaper clippings and other appropriate material.

While neatness of presentation is always helpful elaborateness or size of an entry is not necessarily the criterion of its worth. Judging is based upon the Fire Prevention Week job done in a municipality of a given size with the facilities available.

THE three general classifications in the Fire Prevention Week Contest are municipal, government, and industrial.

Any city or town in the United States or Canada may enter the municipal classification. Entries are judged within their group. For the United States these groups are as follows: Class I—over 500,000 population; Class II — 250,000 to 500,000; Class III — 100,000 to 250,000; Class IV — 50,000 to 100,000; Class V — 20,000 to 50,000; and Class VI — under 20,000 population. In Canada Class A cities are those with 100,000 population or over; Class B cities have populations of 25,000 to 100,000; Class C cities have populations of 10,000 to 25,000; Class D cities and towns have populations of 5,000 to 10,000; and Class E cities and towns have populations under 5,000. A citation is awarded to the winning entrants of each classification and Grand Awards are given to the municipal winners in both the United States and Canada. Last year, Atlantic, Iowa, a city of approximately 6,500 population was chosen the winner from the 3,339 U. S. entrants. Sherbrooke, Quebec, led the entrants of 660 Canadian cities and towns.

Any agency or armed service installation of the U. S. Government may enter the government classification. This will include the Army, Navy, Air Corps, Coast Guard, and installations maintained by the Veterans Administration, Atomic Energy Commission, and others.

Awards to government entrants last year were as follows: In the naval station competition there was a tie for first place between the Boston Naval Shipyard and the Naval Ordnance Laboratory at Silver Spring, Maryland.

Fort Bragg, North Carolina, won the competition among Army depots. In Air Force competition the winner was the United States Air Base at Bolling Air Force Base, Washington, D. C.

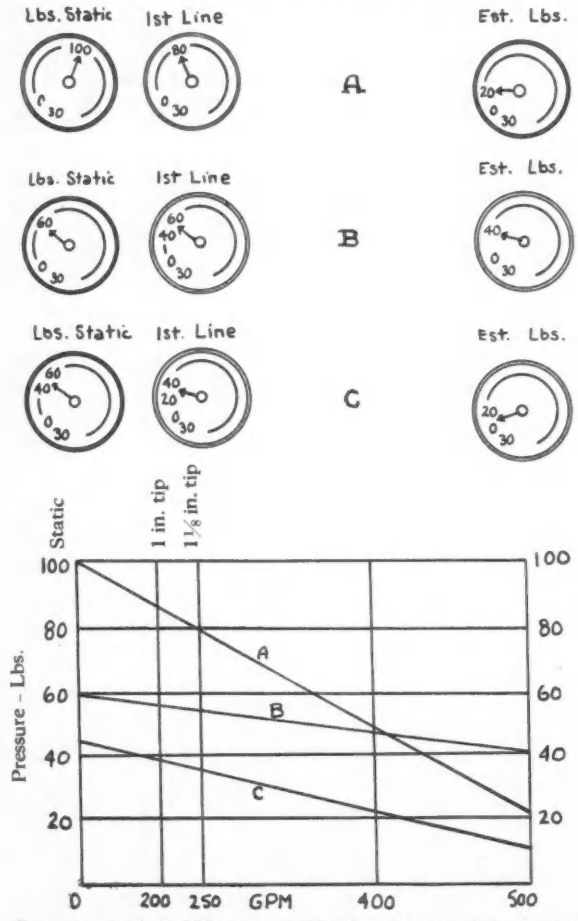
The industrial classification is open to any industrial plant in the United States and Canada. The Delco Remy Division of General Motors at Anderson, Indiana, had the winning Fire Prevention Week report for this group last year.

Estimating Probable Hydrant Pressures Where Pumpers Are to Be Operated at Rated Capacities

by Warren Y. Kimball

IN the August issue of FIREMEN in "Making A Good Job Of It," we discussed the use of hydrant suction or compound gage readings to estimate maximum hydrant performance. The same practice of noting the difference between hydrant static pressure with no water flowing and the hydrant pressure when the first line is in service may be used to calculate the pressure at which a centrifugal pump may deliver its rated capacity from a given hydrant.

Below is a chart showing typical hydrant discharge "curves" which begin with a static reading and continue to a residual pressure with 500 gpm flowing. Above the curves are the corresponding suction gage readings on the pumper. Let us assume that a 500 gpm pumper, rated to deliver its capacity at 150 lbs., is available to supply a fire ground hose layout calling for 500 gpm at about 170 lbs. Can it do the job from a given hydrant without exceeding a safe motor speed? As is shown on the chart, Hydrant A will give 500 gpm at 20 lbs. residual to which the pumper can add 150 lbs. pressure at 500 gpm flow, thus providing the desired output at 170 lbs. Hydrant B can give the desired flow at 40 lbs. making it possible for the pumper to deliver 500 gpm at 190 lbs. Hydrant C gives 500 gpm at only 10 lbs. which is scarcely enough pressure for the layout in question unless the pump is expected to perform at more than its rated output with a possibility of failure due to overload.



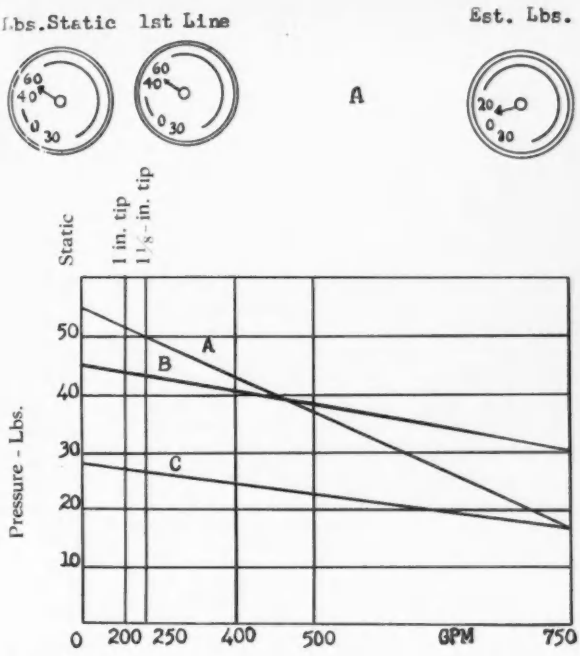
Pressures at which 500 gpm centrifugal pump may deliver rated capacity from hydrants may be calculated by observing static pressures and pressures and pressure drop with the initial line. The hydrant residual pressure may be added to the pressure at which the pump is rated to deliver its capacity. Readings from three typical hydrants are illustrated.

As demonstrated in the August FIREMEN, the pump operator upon noting the difference in suction gage readings between the static pressure and the pressure with the first line in operation, can predict with satisfactory approximation the residual hydrant pressure at 500 gpm. For example, on Line A a pressure drop of 20 per cent when the first line is placed in operation indicates a probable residual pressure of about 20 lbs. with 500 gpm flowing.

The chart on the following page shows residual pressures from three typical low-pressure hydrants with flows up to 750 gpm. Suppose a fire department wishes to know at what pressure hydrant A will supply a 750 gpm pumper operating at capacity. This hydrant has a static (non-flow) pressure reading of 55 lbs. The suction or compound gage pressure falls to 50 lbs. when 250 gpm is being discharged through a 1⅛-in. tip. A ruled line (A) extended from the static and first line gage readings shows that the hydrant should give 750 gpm at about 16 lbs. residual. Of course, the hydrant may give somewhat more than this if the water works pumps are arranged to increase the pressure. In any event, the 16 lbs. can be added to the 150 lbs. at which the 750 centrifugal pumper can deliver its 750 gpm so that capacity may be obtained at about 166 lbs.

Hydrant B, although starting with 45 lbs. static pressure gives 750 gpm at 30 lbs. because it has a much flatter "curve" as indicated by the small pressure drop when the first line is placed in operation. Hydrant C, although having a relatively low static pressure gives 750 gpm at the same flow pressure as Hydrant A. A fire department should observe the pressure performance curves of various hydrants in its area in order to know what residual pressures may be expected with large flows.

NOW let us suppose that a 750 pumper is called upon to supply two 265 gpm streams at 230 lbs. pressure (⅛-in. tips at 50 lbs). Can this be done at the hydrants shown on the 750 gpm chart? The total required flow is 530 gpm. A 750 (Class A rating) pumper delivers 525 gpm from 10-ft. draft at 200 lbs. As shown by the chart, hydrants A and B give better than 500 gpm at well in excess of 30 lbs. This pressure added to the pump output indicates that a 750 pumper operating from these hydrants should readily deliver the 530 gpm at 230 lbs. (200 lbs. pump pressure+30 lbs. hydrant flow pressure). Hydrant C, on the other hand, would give 530 gpm at only a little more than 20 lbs. so that the pump might be exceeding its rated performance in attempting to supply the desired flow from this hydrant.



This chart shows typical hydrant residual pressures with 750 gpm flowing. Gage readings for Line A are shown above.

However, knowing the maximum performance of the pump and hydrant, reasonably satisfactory results might be obtained by accepting slightly less nozzle pressure. This would reduce the flow and the friction loss in the hose. Two 45 lb. streams with the same tips would total 500 gpm, and the drop in NP and FL would bring that hose layout within the performance of the 750 gpm centrifugal pumper receiving 500 gpm at 20 lbs. and discharging at 220 lbs.

Some persons will say that fire pumps are built with a reserve and can exceed their rated capacities. This may be true just as it is true that the human heart (a pump) has a reserve that can exceed normal demand. However, it is poor practice to knowingly exceed the rating for which a machine is built because impairment or failure may result at a critical time due to needless and protracted overload. It is important that pumper operators know the rpm at which their pumper will deliver its rated capacities at 150, 200, and 250 lbs. Then, assuming that the pump is operating in the desired pressure or volume position, it will be possible to run the machine at its safe rated capacity at the appropriate motor speed, taking advantage of whatever additional pressure that the hydrant may be able to provide. Also, where the operator knows the proper motor speeds, it is frequently possible to provide the desired flow and pressure at a lower motor speed by operation of the capacity-volume changeover valve.

Convention Notice

THE Sixty-ninth Annual Convention of the Nebraska State Volunteer Firemen's Association will be held in Norfolk, Nebraska, October 15, 16 and 17. Headquarters will be at the Hotel Madison. For information contact Russell D. Salak, Secretary-Treasurer, PO Box 312, Schuyler, Nebraska.

International News Soundphoto

Pumpers Aid Sprinklers in Fire at Peabody, Massachusetts

FIRE originated in this unsprinklered wood 1- and 2-story and attic hay, grain and feed storehouse in Peabody, Massachusetts, on August 4. By the time apparatus was called an adjacent 2-story brick building was involved and a general alarm brought fire departments from surrounding communities of Salem, Beverly, Lynn, Marblehead, and Danvers responding.

Radiated heat also involved a 4-story and attic frame tannery building with wet and dry sprinklers with local sprinkler alarms. About 20 of these sprinklers operated including a few that a mechanic had broken with a hammer prior to fusing.

Altogether, 12 engine companies and an aerial ladder company were used for fire fighting. Because of the heavy draft by pumpers, pressure in the street main was so reduced that no water was being discharged by the sprinklers under the roof of this exposed building. Pressure in the street main, normally about 80 lbs., was reduced below 23 lbs., which was the minimum amount essential to the operation of the roof sprinklers. A fire captain on the roof of the 4-story building saw that no water was being discharged by the sprinklers and ordered a line from a pumper to be connected to the siamese fire department connection on the building. This was done with satisfactory results. Fire damage was confined to the roof and windows of the building.

The storehouse was completely destroyed and contents of the other buildings received some water and fire damage. Total loss was estimated at more than $250,000.

"Ya gotta do somethin' about them brakes grabbin'!"

Operating Fire Department Pumpers

From a report of a sub-committee of the NFPA Committee on Firemen's Training. (See FIREMEN for June, July, and August, 1951.)

Charging Hose Lines

GENERAL. Functioning of an engine company as a smooth working unit depends on clear understanding by each member of the part each must play in any given evolution. A pump operator who is over zealous to get water to the fire scene can place the lives of fellow firemen in jeopardy, and also cause delay, through turning water into hose lines too soon.

It should be a policy of each department that each hose line be charged only at a command from the officer or man in charge of that hose line. Nozzle men can be seriously hurt when the hose lines they are advancing are charged unexpectedly.

Following are general hints and precautions to be observed:

1. Be certain that hose is fully coupled to the proper pump outlet.

2. Be certain that hose crew is ready and waiting for water.

3. Open discharge gate valves SLOWLY to permit the water under pressure to start movement at a low velocity.

4. The pressure as recorded on the pressure gage should preferably be 50 lbs. or less when discharge valves are opened (other lines may be in service from the pump).

5. When supplying a centrifugal pump from draft it is important to open discharge valves slowly to prevent loss of prime, especially with single stage pumps.

6. Any leak or drip from gaskets, valves or couplings should be remedied as soon as practicable.

SMALL PRECONNECTED LINES. To take full advantage of the water tank capacity of modern pumpers, many fire departments have installed preconnected 1½-in. hose lines supplementing or replacing the booster lines usually carried on pumpers. In some areas considerable 1-in. or 1⅛-in. cotton rubber-lined hose is also used in this manner.

Fire fighting experience has shown that a short burst from a larger nozzle will more quickly knock the fire down to the point where it can be mopped up with small lines with a resultant saving of water. Pumpers can be in service with preconnected lines from 100 to 800 ft. in length depending upon local conditions. The hose may be rubber covered, rubber lined or cotton jacket rubber lined. The following suggestions cover the charging of small preconnected hose lines:

1. Pump operators should know the required pressures for various small line assemblies, as indicated by adding the required nozzle pressure, the friction loss in small hose, and the pressure required for elevation (in general, about 50 lb. nozzle pressure will be required for solid streams and about 100 lb. nozzle pressure for low pressur fog nozzles). Some departments provide upwards of 100 lbs. pressure for booster lines with solid stream tips and 200 lbs. pressure for booster lines with fog nozzles. Friction loss will vary with the diameter and length of line.

2. Control valves for small lines should be opened fully to obtain maximum flow. The quantity of water discharged by these lines may not be sufficient to indicate by pressure gage readings whether the valve is fully opened. This must be determined by position of the valve.

3. Where several small lines are carried preconnected, the pump operator should know where each leads when advanced at a fire in order to be certain of operating the proper control. Persons ordering water should indicate which lines are to be charged.

Lbs. Friction Loss per 100 Ft. in Small Rubber or Rubber-Lined Hose

Flow GPM	Hose Diameters in Inches ¾	1	1⅛	1½
10	13.5	3.5	2.0	0.5
15	29.0	7.2	4.1	1.0
20	50.0	12.3	7.0	1.7
25	–	18.5	10.4	2.6
30	–	26.0	14.6	3.6
35	–	35.0	19.8	4.8
40	–	44.0	24.8	6.1
45	–	–	31.1	7.6
50	–	–	37.7	9.3
60	–	–	–	13.2
70	–	–	–	17.0
80	–	–	–	23.2
90	–	–	–	27.7
100	–	–	–	33.0

Note that FL in ¾-in. hose is four times that of 1-in. hose and seven times that of 1⅛-in. hose. Much of the dissatisfaction with fog nozzle performance on booster lines is due to failure to provide sufficient pressures to overcome the high friction loss in ¾-in. hose.

GPM Discharge through Small Nozzles

Nozzle Pressure in Lbs.	Nozzle Diameter in Inches ¼	5/16	½	5/8
40	12	26	46	72
50	13	29	51	80
60	14	32	56	88
70	15	34	61	95
80	16	37	65	102
90	17	39	69	108
100	18	41	73	114

BIG LINES. At all working fires where sufficient water is available, small streams should be backed up at the earliest possible moment by one or more big lines (2½-in. diameter or greater). While the number of fires requiring streams from nozzles directly attached to 2½-in. hose are much fewer in number than those extinguished with small lines, they are usually those that have passed the incipient stages and are consequently more destructive. The cooling capacity provided by a large flow from big hose lines is needed to cope with fires in advanced stages. For charging big lines:

1. Open discharge gates slowly. This cannot be overemphasized because of its importance for safe handling of large size hose lines. Water turned into hose lines too quickly not only presents a hazard to nozzlemen but may make the line practically immobile.

2. Be sure that the proper discharge gates are opened. Attempt to know where each line attached to the pump is advanced so that proper action may be taken. (Some departments place metal tags on each line to identify hose lines by number.)

3. Serious kinks should be straightened out because they may cause failure of the hose or impede the flow of water. While the hoseman who goes to the pump for water should see that there are no major kinks to prevent water from reaching the nozzle, the operator should see that the line is sufficiently straightened out near the pump before opening a discharge gate. Minor kinks will be removed by the flow of water.

4. Each pump operator should observe the hose lines supplied by his pump and be alert for signals from the hose crews.

Deployment and Attack = Good Stop

Here is a summary of an excellent example of fire reporting. The pictures and the following information are taken from a detailed report recently submitted to the NFPA Fire Record Department by Deputy State Fire Marshal J. W. Gault, of Salem, Oregon.

FIRE was discovered in the Oregon Trail Furniture Shops, Inc., Bend, Oregon, about 6:00 P.M. on June 30, by several persons in the area. An alarm was transmitted to the Bend Fire Department, headed by Chief LeRoy S. Fox (NFPA Member) and consisting of 11 paid members and 22 volunteers.

Weather conditions were perfect for a severe fire. Bend was experiencing its fiftieth day without precipitation and temperatures were in the high eighties, humidity was in the vicinity of 15% and a 16 mph westerly wind was blowing.

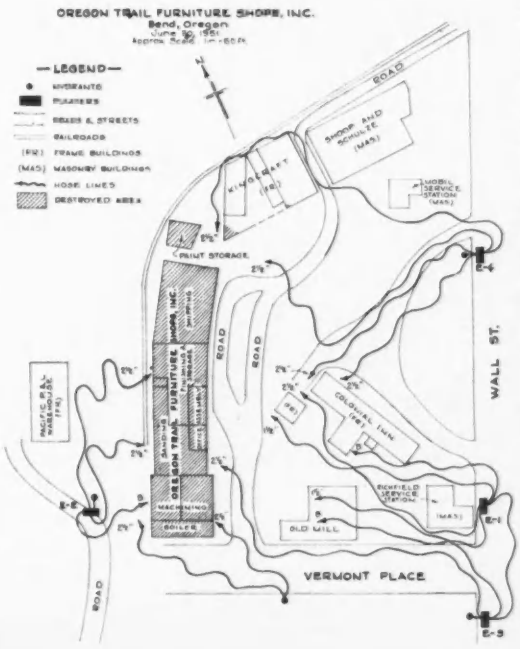
First observers stated that fire appeared to start near a door next to a stack of lumber on the west side of the building. All witnesses agreed that the fire started down low and was not too large, but that it advanced rapidly up the door and lumber pile, broke over the edge of the eave, spread rapidly in both directions across the roof, and that at least half of the roof area was involved before arrival of the first piece of apparatus. The entire plant was involved in a matter of minutes.

First apparatus to arrive was Engine No. 1, a 1950 F-7 500 gpm Ford three stage pumper with a combination midship pump and high pressure unit carrying 500 gallons of water, 2 booster reels, 800 feet of 2½-in. hose, 500 feet of 1½-in. hose. The three-man crew laid two 2½-in. lines from the hydrant at Vermont Place and Wall at the south end of the building. Heat was too intense to connect the engine at this position, so it was located at Wall St. to cover exposures.

Engine No. 4, a 1000 gpm 1950 Mack pumper had 1500 feet of 2½-in. hose, 200 feet of 1½-in. hose, 250 gallons of water, and a booster reel. It connected to a hydrant on Wall St. north of Vermont place and lines went into action to the northwest corner of the Colonial Inn, to the area north of the inn, and to the west and north sides of the Kingcraft building and the paint and lacquer building where the spread of flames to the north was checked.

Engine No. 3, a 1944 Seagrave 750 gpm pumper carrying 1400 feet

(*Please turn to page 25*)



Top pictures, left to right:
(1) This picture was taken at the south end of the plant. This was the advanced state of the fire prior to the time when the initial hose lines could be placed in operation.
(2) This view from the west side shows the intensity of the flames as they invol ed the roof and refuse pile. Firemen in the foreground are placing a pumper in operation and stretching lines.
(3) Hose crew operating a hydrant line on the west side of the building.
Bottom pictures, left to right:
(1) Close-up of pumper in operation at the latter stage of the fire. Intense heat broke the headlight lens on this unit.
(2) View of west side, south end of burning plant. Pacific Power and Light Company building in left foreground. Note smoking power pole in rear of and above warehouse.
(3) General view of west side of burning plant. Roof on south end is practically gone and north end of new section is heavily involved. Dense black smoke at extreme left is coming from paint and lacquer building. Stream from pumper is operating on blaze. Power company warehouse in foreground.

Latest in Heavy Duty Pumpers f

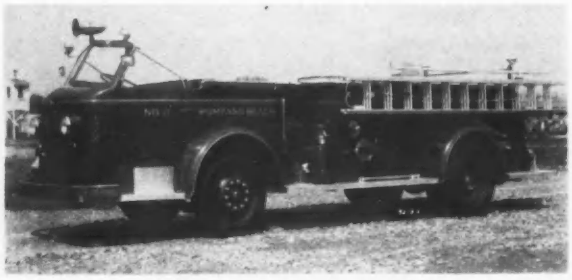
ON these pages we present a selection of photographs of the latest heavy duty fire department pumpers by 18 American manufacturers and assemblers who furnished photographs upon invitation. The September issue of FIREMEN showed rural and suburban pumpers and tank trucks mostly assembled on commercial truck chassis.

The heavy duty pumpers are those built by fire apparatus manufacturers either on their own chassis or on heavy commercial truck chassis. Pumping capacities for the most part range between 750 and 1500 gpm. Most of the pumps meet the Class A (capacity at 150 lbs.) tests and are of the centrifugal pressure-volume type. Only one of these pumpers happens to have a rotary pump. This is interesting because a few years ago a similar display would have shown a more even division between positive displacement and centrifugal pumps.

Practically all of the apparatus shown here can be classed as "triple combination" consisting of pump, hose and water tank. Practically all carry more or less ladder equipment but not enough to meet "quadruple combination" requirements.

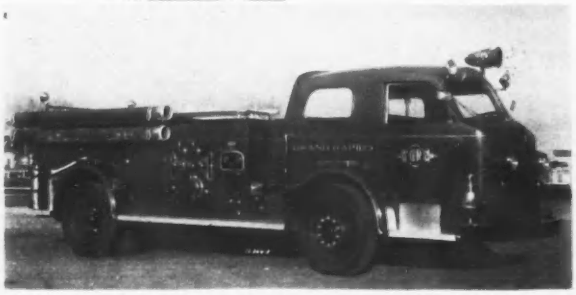
A number of the manufacturers considerately furnished an extensive selection of photographs of their recent heavy duty pumpers. Where there were distinct differences in equipment, chassis, or body design, several recent models are shown as far as space permits.

American-LaFrance-Foamite Corp., Elmira, New York



750-gpm bronze pump, stainless steel shaft, all ball bearing; 204 hp V-12 engine; 150-in. wheelbase, 25-ft. turning radius; open cab ahead of engine design, five-man seating.

American LaFrance Corp.

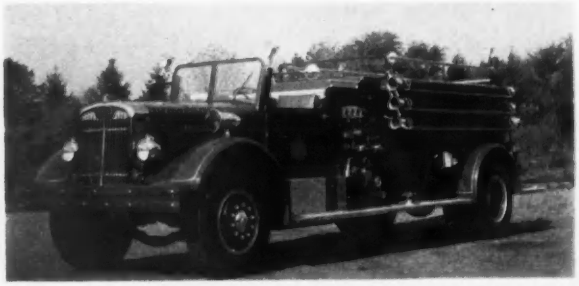


1250-gpm bronze pump, stainless steel shaft, all ball bearings; 275 hp V-12 engine; 160-in. wheelbase, 27-ft. turning radius; closed cab, cab ahead of engine design, five-man seating.

American LaFrance Corp.

1500-gpm bronze pump, stainless steel shaft, all ball bearings; 275 hp V-12 engine; 160-in. wheelbase, 27-ft. turning radius; closed cab ahead of engine, five-man seating; two-gated 2½-in. inlets; deluge gun mounted over tank.

The Autocar Company, Ardmore, Pennsylvania



750-gpm Hale pump; semi-cab on 200-in. wheelbase by Autocar, air brakes; 500-gallon water tank; wet water tank; 300-ft. rear end booster reel.

The Boardman Company, Oklahoma City, Oklahoma

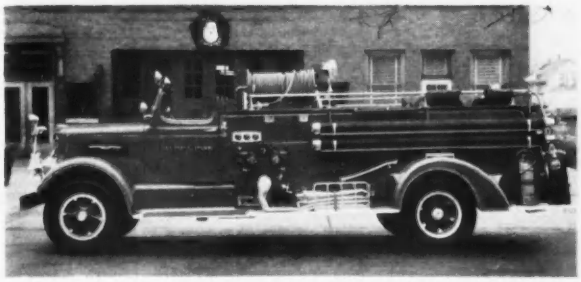
750-gpm pump on Ford F-7 chassis; gear controlled deck gun.

John Bean Division, Food Machinery and Chemical Corporation, Lansing, Michigan and San Jose, California

750-gpm John Bean high-pressure-volume pumper combining high pressure fog and multi-stage volume pump; two reels high pressure hose with fog guns; large water tank; International chassis.

for Rugged Municipal Service

**Boyer Fire Apparatus Company,
Logansport, Indiana**

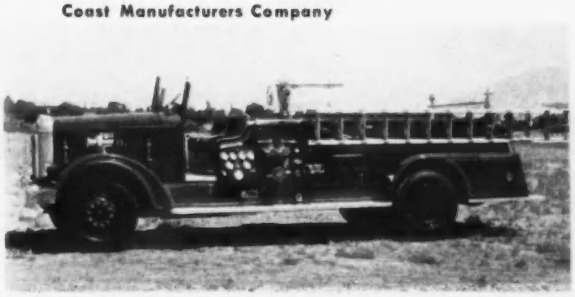


750-gpm Hale pump; White 150-A engine, 135 bhp; standard triple combination.

**Coast Manufacturers Company,
Portland, Oregon**

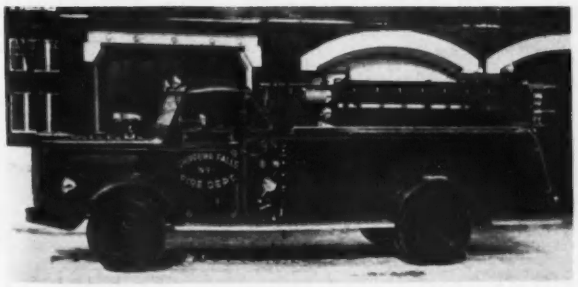
750-gpm Waterous centrifugal pump and Myers 4660 high pressure pump; 500-gallon tank; GMC 640 chassis, 178-in. wheelbase; live 1½-in. line, two 200-ft. reels, two 25-ft. jump lines.

Coast Manufacturers Company



1250-gpm Waterous pump; 250-gallon tank; Peterbilt Model 280, 187½-in. wheelbase; Hall-Scott 480 engine. 1300 ft. 2¾-in. hose, 600 ft. 1½-in. hose, 300-ft. high pressure reel.

**W. S. Darley & Company,
Chicago, Illinois**

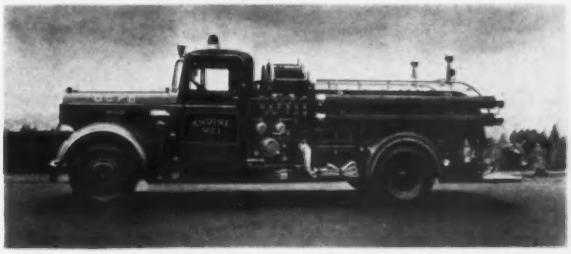


750-gpm Champion pump; FWD chassis with cab; side storage compartments.

**Howard Cooper Corporation,
Portland, Oregon**

750-gpm Hale ZE pump; International chassis; 200-gallon tank; 1000 ft. 2½-in. hose, 400 ft. 1½-in. hose.

Howard Cooper Corporation



1250-gpm Hale ZMHD pump; Kenworth Motor chassis; Hall-Scott 480 motor, 100-gallon tank; 1500 ft. 2½-in. hose, 400 ft. 1½-in. hose.

**Howe Fire Apparatus Company,
Anderson, Indiana**

500-gpm rotary pump on Howe Defender 750-B chassis; seven-man heated cab; windshield for rear step; floodlight equipment.

Howe Fire Apparatus Company

750-gpm pumps on Howe Defender 750-A chassis; overhead ladders with tormentor poles. (Two of 22 similar jobs for Atomic Energy Commission.)

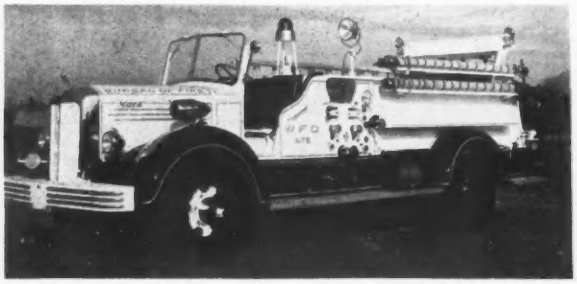
Kenworth Motor Truck Corporation,
Seattle, Washington

1500-gpm pump; Model 721, 296 hp.; 1500-ft. hose capacity; radio equipped.

Maxim Motor Company,
Middleboro, Massachusetts

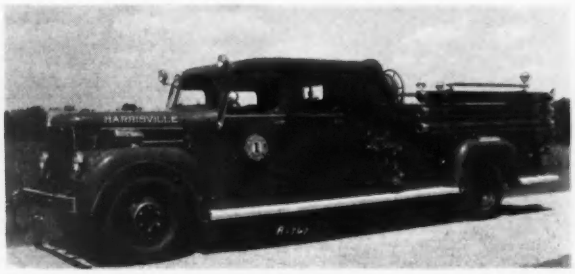
750-gpm pump; Maxim Model 2357; special features: large slow speed engine; oversize booster reel.

Fire Apparatus Division,
Mack Manufacturing Corporation,
Long Island City, New York



750-gpm pumper, individual pressure gages; Type 85LS Mack; 500-gallon flat tank; side mounted hose reels; aluminum ladders.

Maxim Motor Company

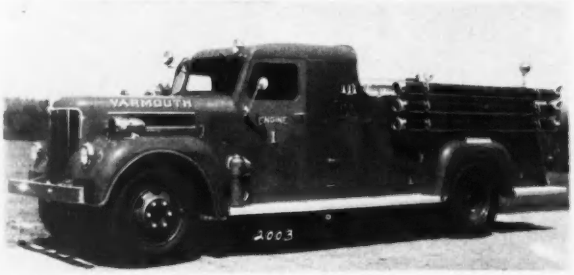


750-gpm pump; Maxim Model 1417; features: seven-man four-door sedan; extra suction hose; special tank and hose body capacity.

Mack Manufacturing Corporation

1000-gpm pumper; Type 95LS Mack, canopy cab; two 85-gallon booster tanks; two 1½-in. wet lines in hose pockets. Front suction inlet.

Maxim Motor Company



750-gpm pump; Maxim Model 1417; features: three-man closed cab; extra suction hose; 500-gallon water tank; covered booster reels.

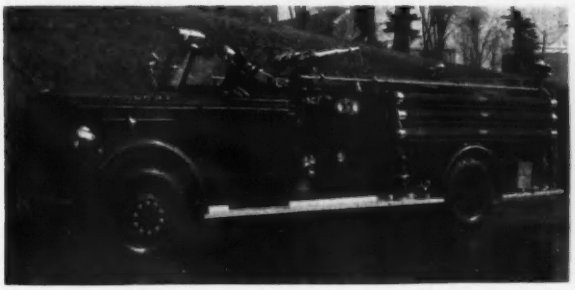
Mack Manufacturing Corporation

1250-gpm pumper, individual pressure gages; Type 125LS Mack; semi-cab.

Oren Roanoke Corporation,
Roanoke, Virginia

750-gpm pump-tanker unit built on medium and large commercial chassis; dual reels, 500–600-gallon water tanks.

Oren Roanoke Corporation (continued)
Roanoke, Virginia



750- and 1000-gpm pump-tanker units built on Oren Special Fire Chassis (known as Custom-Built); large water tank; dual reels; deck gun; enclosed pump compartment.

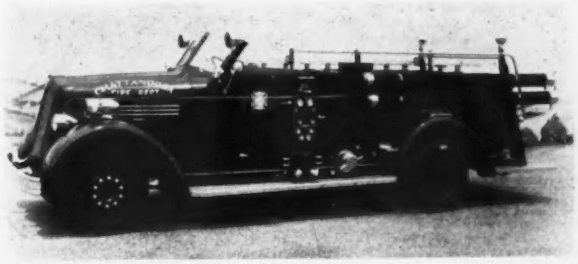
Peter Pirsch & Sons Company,
Kenosha, Wisconsin

Combination pumping engine with semi-cab. (Built in 750-, 1000-, and 1250-gallon capacities.)

Peter Pirsch & Sons Company

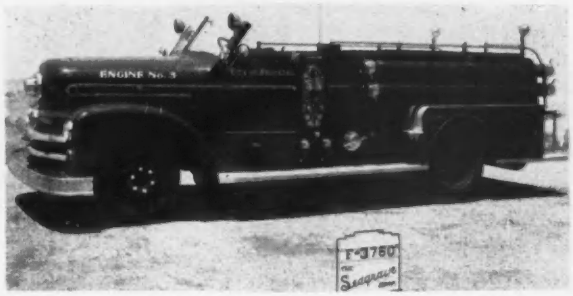
Combination pumping engine with canopy cab. (Built in 750-, 1000-, and 1250-gallon capacities.)

The Seagrave Corporation,
Columbus, Ohio



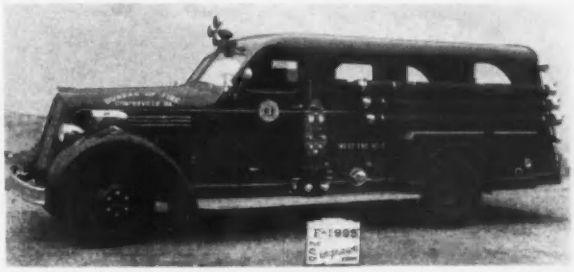
1000-gpm pump; 12-cylinder Seagrave, semi-cab.

The Seagrave Corporation (continued)
Columbus, Ohio



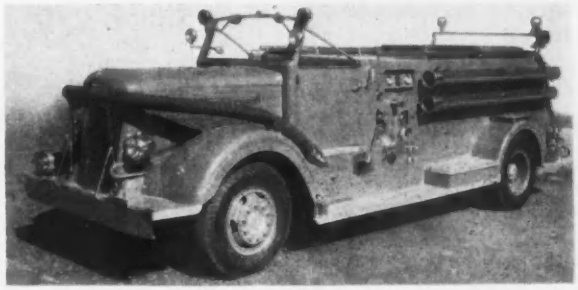
750-gpm pumper with 212 hp V-12 motor; auxiliary high-pressure pump optional.

The Seagrave Corporation



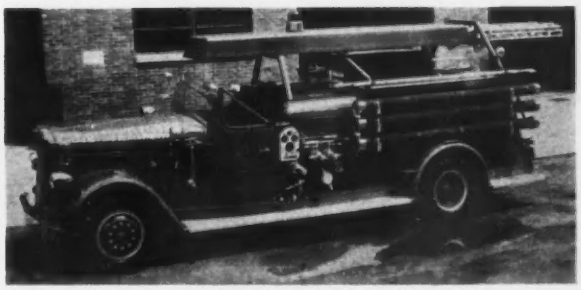
750-gpm pump, independent line pressure gages; 12-cylinder Seagrave; sedan body; extra suction hose.

P. E. Van Pelt, Inc.,
Oakdale, California



1000-gpm Hale ZMHD pump; White chassis WB28; 2800-ft. hose body; two baskets for 200 ft. 1½-in. hose; extra 20-ft. permanent suction hose hookup (4 in.).

Ward LaFrance Company,
Elmira, New York



750-gpm pump; extra suction hose; overhead ladder mounting for pole ladder; deck storage compartments.

CIRCUL-AIR
THE AIR-CONDITIONING
FIRE HOSE DRYER

Patented

Circul-Air is the patented, electrically operated hose dryer which circulates prewarmed fresh air through coiled wet hose at the rate of 5 to 6 air changes per minute. It's designed to lengthen hose life, improve the appearance and functional design of new fire houses, and to save floor space and hard work. No other drying method is so fast — so economical — so easy to use.

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Clears *your* side of the way, too, as well as warns those approaching.

Flash'N Wag

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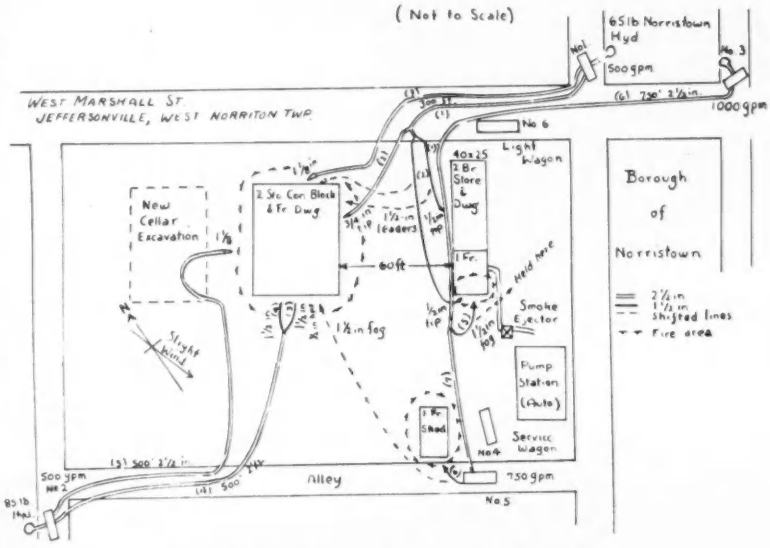
In a class by itself. Combination flashing, oscillating WIG-WAG Redhead. Beam range 1000 feet ahead, visible for miles. Safer, faster, quieter runs. 6" and 8" diameter sizes.

"Master-Light-Makers for 33 Years"

CARPENTER MFG. CO.
168 MASTER-LIGHT BLDG.
BOSTON - 45 -
SOMERVILLE, MASS.

Jeffersonville and Norristown, Pa. Firemen Fight Incendiary Blaze

CHIEF A. G. Harrison of Jefferson Fire Company, Jeffersonville, Pa., reports an interesting incendiary fire in his town on July 24. The fire involved three buildings located near the Norristown, Pa., city line. The call came from the police at 2:15 A.M. Chief Harrison found buildings afire as shown on the diagram. The 2-story concrete block dwelling was afire on both floors and suddenly became completely involved. Engine 1 with a paid driver and 4 volunteers came from the station a mile away in 3 minutes and was ordered to lay a 2½-inch line to supply two 1½-inch leader lines to protect exposures and enter the store and dwelling. A second line was run to the larger dwelling. Within two minutes the No. 2 pumper arrived with a volunteer crew under the direction of the Chief Engineer. This company covered the rear as shown in the diagram. A mutual aid call brought 2 pumpers, a light wagon, and a smoke ejector from Norristown.



Plan of Fire Fighting Operations at Jeffersonville from Diagram Prepared by Chief Harrison

The original showed 2½-in. lines in red and 1½-in. lines in blue. The approximate sequence in which both sizes of hose were run is given by the figures in parentheses.

First alarm response: Engines 1 and 2.

Engine 1 laid 300-ft. line, 2½-in. line (1) wyed to two 1½ and one 2½-in. lines. First 1½-in. stream used to cool exposures; Second to cellar of store and dwelling. The 2½-in. line (2) with ¾-in. tip operated on adjoining dwelling to hold fire. The next 2½-in line (3) with 1⅛-in. tip operated at front of dwelling.

Engine 2. Two 2½-in. lines to rear. First (4) wyed to supply two 1½-in. lines with ½-in. tips (3) and (4). Its second line (5) with 1⅛-in. tip operated on dwelling from adjacent cellar excavation.

A mutual aid assignment brought service wagon No. 4 with smoke ejector used at basement of store. Another call brought 3 Norristown companies: 3, 5, and 6.

Engine 3 laid 750 ft. 2½-in line (6) to a wye supplying 1½-in. fog nozzle (5) used on store and dwelling and 2½-in. line (7) supplying No. 5 Pumper at rear using 1½-in. fog leader line on both shed and dwelling. No. 6, a Light Wagon operated at front of fire.

When the fire in the store and dwelling was extinguished, the 1½-in. lines were shifted to the dwelling fire and the big lines were shut down.

Handling Hose and Ladders
Pictorial Civil Defense Edition
176 pages $1.50
National Fire Protection Association
60 Batterymarch Street, Boston 10, Mass.

Fire and the Air War
262 pp. $4.00 per copy
National Fire Protection Association
60 Batterymarch St., Boston 10, Mass.

Industrial Dispersion

THE NFPA book, "Fire and the Air War," published in 1946 urged that the U. S. Department of Defense indicate policies to be followed with respect to the limitation of area, bulk, and spacing of buildings in cities as a measure of national defense. Copies of this 274-page book are available from the NFPA executive office for $4.00.

The National Security Resources Board in September 1948 issued a 16-page pamphlet entitled, "National Security Factors in Industrial Location." Copies of this may be obtained from the U. S. Superintendent of Documents, Washington, D. C., for 15 cents. This pamphlet suggested that when a plant was considering additions that these additions be located so as to reduce the over-all hazard of the plant to fire and bombing. It further suggested that if a plant was considering a new location, a location outside of a potential target area be chosen.

Another pamphlet has just been issued by NSRB, 16 pages, approximately 9 by 12 inches, which may also be obtained from the U. S. Superintendent of Documents for 25 cents. This is entitled, "Is Your Plant a Target?" and further stresses the urgent need for industrial dispersion. It urges civic organizations to work out a program of industrial dispersion within metropolitan areas.

It recommends a program designed primarily to disperse new and expanding industries, not to move established industries. It shows what can be done by modest movement of industrial locations while keeping this deployment in each case in the same local marketing area. It suggests that new industrial areas should be 10 to 20 miles from any densely populated urban area and that industrial development areas should be limited in size to avoid any concentrations which would create new targets.

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1941 Cadillac Ambulance

Four-passenger type
Siren, top lights, stretcher
supply cabinet
2 heaters, 5 new tires

Beach Haven First Aid Squad
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HALE TYPE FZZ Portable Pumping Unit

● Handy for Re-Laying to Major Pumper

● Compact yet powerful!
● Designed for Fire Fighting

Write Today! →

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HALE FIRE PUMP COMPANY
Conshohocken, Pa.
Gentlemen:
☐ Please send us detailed information on the HALE Type FZZ Portable Pumping Unit.
☐ We are interested in a demonstration. (No obligation.)

NAME .....
FIRE COMPANY ..... STATE.....
TOWN ..... Phone No.....

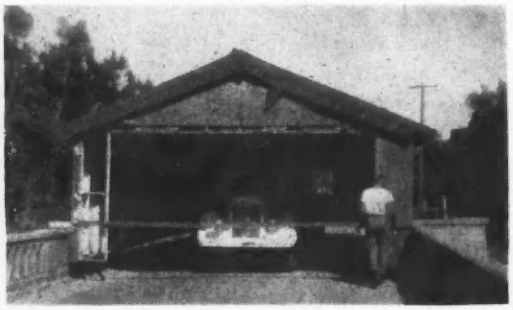
*Check square desired.

Directly above — For 12 hours these two FZZ units supplied water through 650 ft. of 1½" hose to a large pumper fighting a barn fire. At top — Single FZZ relaying to major pumper.

Fire Prevention Display at Sioux Falls, South Dakota

A FIRE Prevention exhibit last year at the Tri-State Sioux Empire Fair in South Dakota was the result of cooperation between the Sioux Falls Fire Department, headed by Chief Carl F. Swanson (NFPA member), the Fire Safety Committee of the Sioux Falls Safety Council, and a number of local business firms.

The building chosen to house the exhibit was an old army barracks. This had to be renovated and moved the distance of a mile to the fair grounds. Members of the Fire Department and the Fire Safety Committee, headed by Captain E. F. Baumheier, Chief of the Fire Prevention Bureau, worked day and night and with the financial assistance of the business firms the task was accomplished.



A narrow squeeze resulted when the truck carrying the barrack came to this bridge. By careful maneuvering, however, the trip was made successfully to the Fair Grounds.

One end of the building was removed to facilitate moving. As shown in the picture below transporation was no easy task, but it was done successfully and within 18 days the barracks had a new siding, a new roof, windows, roof ventilators, doors, and an attractive display was ready for Fair visitors.

Fire hazards were illustrated by a number of eye-catching displays. One of the most forceful was a board showing examples of right and wrong electrical wiring. Some of the "wrong" examples came from buildings where death or injury had resulted from fire. This display attracted considerable attention from visiting electrical inspectors and contractors.

Another important exhibit was that showing the proper methods of LP gas installation in the home. Members of the Sioux Falls Fire Department also demonstrated extinguishers, resuscitators, and other equipment. There were also displays on flameproofing fabrics and on common fire hazards in the home. Some 30,000 visitors were impressed enough to take 25,000 pieces of safety literature when they departed.

Captain E. F. Baumheier poses with the first pumper owned by the Sioux Falls Fire Department and featured at the Fire Prevention exhibit. Note the metal wheels, the length of suction hose, and the straight frame.

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Fire Apparatus Salesman

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Dutchess, Putnam, Westchester and

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Firemen, 60 Batterymarch St.

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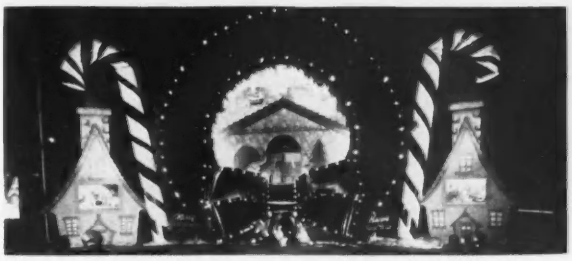
Public Relations of the Meaderville Volunteer Fire Department

A VIGOROUS and successful policy of cooperative effort has marked the growth of the Meaderville, Montana, Volunteer Fire Department (NFPA member department). This active group has commanded respect by leading in the civic and social activities of Meaderville, a suburb of Butte.

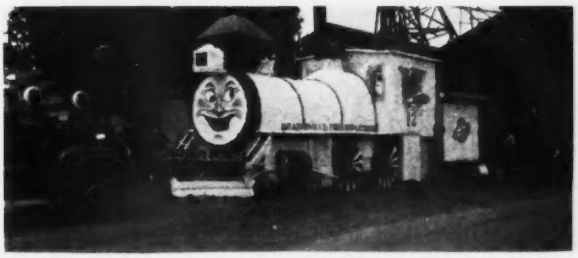
Currently headed by Chief Frank Gorsh and Assistant Chief Robert Brown, the 28 members have created a "fire department consciousness" by making their headquarters a community center of activity.

Some of the achievements of the members are shown on this page. The two floats were used in Fourth of July celebrations, while the Christmas display received national attention last year. The fire fighters also sponsor an annual picnic, a "Good Will" club for men going into the service, and a children's Christmas party. A more recent accomplishment was the installation of 29 street lights in the town by the volunteers.

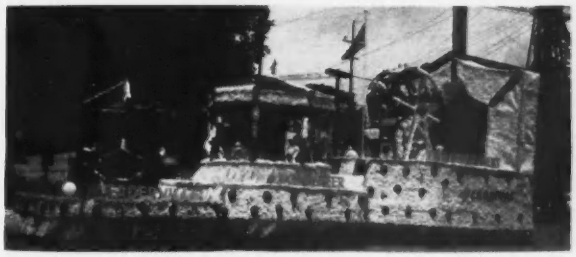


Everyone in Meaderville and surrounding communities looks forward to Christmas and the excellent displays created by the volunteers.

Each year a full page advertisement, sponsored by local business firms, appears in a Butte paper, calling attention to the efforts of this active fire department. While such publicity is welcomed, it is not a novelty to the volunteers. The commendable activities of Meaderville's Fire Department have been the "talk of the town" since the department was organized in 1910.



This colorful prize-winning train, driven by "shmoos" had an animated face, turntable, and wheels for the Fourth of July parade.



Another prize-winning float was this one with moving airplanes, merry-go-round, and ferris wheel.

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Vaseline Sterile Petrolatum Gauze Dressings

TRADE-MARK ®

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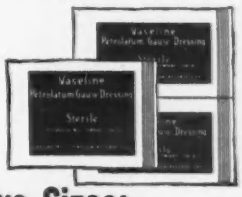
To Open foil-envelope, cut with scissors along dotted line on back of envelope...or in an emergency, tear off seal carefully below this line . . . end of dressing is pulled out of envelope with one hand (use forceps, if handy), while envelope is held with other hand.

Cover damaged surface and area two inches beyond with two layers or more of petrolatum gauze dressing . . . then apply sterile dry bandage to keep clean and hold gently in place—using first-aid principles . . . have injury examined by a physician.



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Duplex envelope: two 3" x 18" dressings.
Six envelopes to the illustrated carton.

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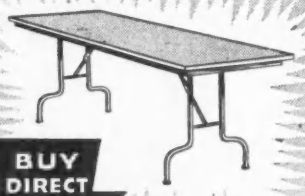

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Waterloo, Iowa, Has Ten Fire Units for Civil Defense

CHIEF Ray Tiller, Civil Defense Director for Waterloo, Iowa, (member NFPA), past-president International Association of Fire Chiefs and secretary-treasurer of the Missouri Valley Association of Fire Chiefs has ten civil defense volunteer fire companies recruited from the personnel of leading industrial plants. Each company consists of ten men trained by officers of the Waterloo Fire Department.

The equipment is inspected and the companies are drilled each month. Individual cards kept both at fire headquarters and at the defense control center give each man's name, address, phone number and training record.

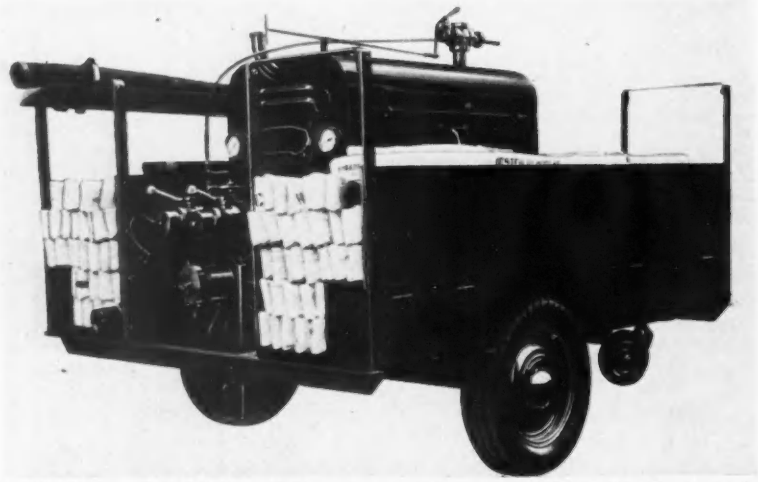
Each company is completely equipped with a 500-gpm trailer pumper, 1000 ft. 2½-in. hose, 100 ft. 1½-in. hose, two 2½-in. nozzles and a 1½-in. combination fog and straight stream nozzle, axes, pump tanks, claw bar, suction hose and strainer. Each volunteer fireman has a rubber fire coat and steel worker's hard helmet.

The civil defense volunteer fire companies are active and under the direct supervision of the Chief or acting chief of the Waterloo Fire Department in the event of any major disaster beyond the capacity of the paid fire department. The extra equipment and manpower supplements but does not replace the normal operation and responsibility of the fire department.

The equipment for each volunteer company cost $3,500 but was provided without expense to the city through an interesting plan. Each industrial plant was asked to contribute $2 per employee to the Waterloo Civil Defense Fire Protection Fund. City Clerk and Auditor H. W. Wente acts as treasurer and purchasing agent of this fund and all equipment becomes the property of the Waterloo Civil Defense Fire Protection Organization. It is understood that this arrangement makes the contributions tax deductible.

Chief Tiller proposed this plan in a mimeographed letter sent to local industrial concerns last November. It met immediate acceptance and has been placed in operation. The ten trailer pumps were purchased from the Construction Machinery Companies "CMC" located at Waterloo. The ten volunteer fire companies were recruited from ten industrial plants with several of the larger plants furnishing twenty men and smaller plants five to ten men each. The units are evenly distributed between the north and south sides of the city.

Each trailer pump is 11½ ft. overall length including the trailer hitch, and 6 ft. 3 in. in width. Tested at draft they delivered 650 gpm at 120 lbs. The trailer units may be attached to almost any truck or auto for towing, or may be pulled by hand.



Ten "CMC Pressure-Flo's" 500-gpm trailer pumpers are in service with 10 volunteer fire companies organized for civil fire defense at Waterloo, Iowa. Each carries 1000 ft. 2½-in. d.j. fire hose.

How to "Keep Posted"

MANY fire departments maintain a reference library for their members not only to help in the solving of the numerous daily problems of administration, training, and fire fighting but also to assure that those men who have the qualifications of good leadership will not lack in sources of authoritative information. The development of a good library of information on the fire service necessitates continual research of the latest publications.

An easy way for an NFPA Member Fire Department to assure receipt of authoritative publications is through the NFPA Book and Pamphlet Service. Member departments may forward a remittance of $10 to the NFPA Executive Office to receive this service. Then as all new NFPA publications come from the press, including those for which there is a charge and those furnished without charge, they are automatically sent to the subscriber. Amounts for publications for which there is a charge are deducted from the subscriber's account until the $10 deposit is exhausted. The subscriber is then notified so that he may renew the service if he desires.

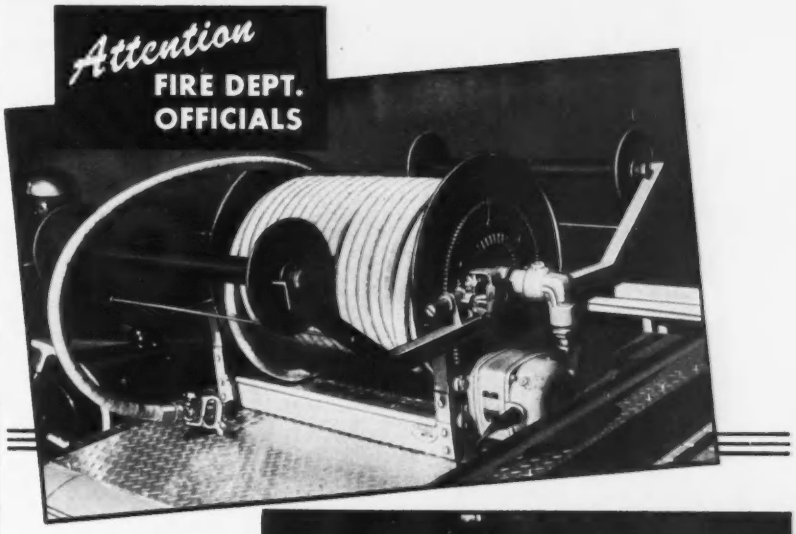
The Book and Pamphlet Service also assures subscribers of receiving promptly those publications that have pre-publication discounts for members. This saves the trouble of applying for such publications before the dates when pre-publication benefits expire.

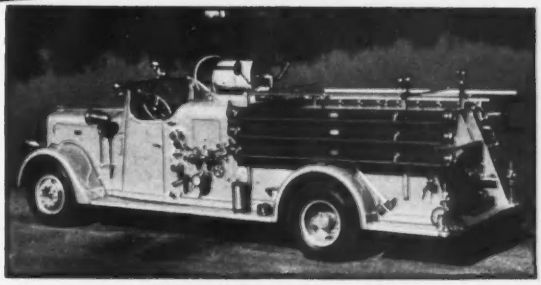
NFPA Regional Meetings

AS previously announced in FIREMEN, the National Fire Protection Association will conduct two regional meetings on the West Coast in October. The first of these meetings will take place October 24-25 in Portland, Oregon. The other will be in Los Angeles, October 29-30.

There is no registration charge for members of paid, call, or volunteer fire departments who attend these meetings in uniform.

Fire Marshal Miles Woodworth of the City of Portland is chairman of the sponsoring committee being organized for the meeting in that city, while the sponsoring committee in Los Angeles is headed by Chief John H. Alderson, NFPA Director and Past President of the International Association of Fire Chiefs.





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New models for fire trucks and airport crash trucks are especially designed with extra strong construction to withstand high pressures and the motor is protected against fog, foam, water and fumes. Developed to overcome the danger factors previously associated with electrical rewinds, the Hannay Reel has been PROVEN SAFE and efficient in exacting factory and field service tests. Explosion-proof, heavy duty motor with permanently lubricated bearings is Underwriters Approved Class 1, Group D, and is an integral part of the reel; needs no attention.

- ★ **Can be connected through conduit, for sealed, safe installation.**
- ★ **Sealed push button control; "push" to start; "release" to stop.**
- ★ **Quiet, positive sprocket and chain drive; no gears to shift; no clutch to engage.**
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- ★ **Smartly designed, compact, durable, dependable.**
- ★ **Simplicity of construction and operation reduces maintenance costs to a minimum.**

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HOSE REELS
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Modern fire fighting calls for *specialized* protective clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

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In our vast selection of rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility of the high-grade materials used are your assurance of long time service and comfort.

Due to government requirements for Midwestern Protective Clothing, it will assist in prompt delivery if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you material samples for your inspection.

MIDWESTERN MFG. CO., Mackinaw, Illinois
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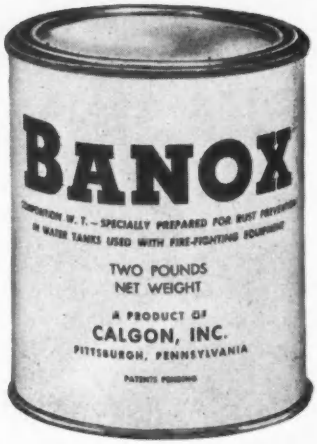
STOP TANK RUST WITH BANOX*

Now you can prevent costly rust or corrosion in your water tanks with new Banox (Composition W.T.). Specially developed to protect fire-fighting equipment, Banox has proven effective in preventing corrosion in all kinds of metal water tanks . . . in all types of water.



Here's what BANOX *does...*

- ★ Controls rust and corrosion scale in pumper and booster tanks and other water storage and hauling tanks used for fire protection.
- ★ Prevents clogging of fog nozzles due to rust and corrosion scale.
- ★ Reduces costly repairs and replacement of tanks . . . helps keep equipment clean and ready for instant use.
- ★ Effective in iron, steel, galvanized or painted tanks . . . with any type of water—hard or soft, stagnant, brackish or sea water.
- ★ Non-combustible . . . Non-toxic!
- ★ Harmless to the skin and clothing, to copper, brass, rubber, wood, paint and fabrics.
- ★ Banox is compatible with "wetter" water.

BANOX is economical and easy to use. One pound per 100 gallons of water — *one dosage protects the tank until the water is used.* Banox, Composition W.T., is especially prepared and packaged for use in water tanks of fire-fighting equipment.

*T. M. Reg. U. S. Pat. Off.

CALGON, INC., HAGAN BUILDING, PITTSBURGH 30, PA.

More from Chief Weiler

CHIEF C. H. Weiler, located at Robinson Lake, 10 miles south of Kenton, Michigan, on Route 16 on the road to Iron River, personally owns and operates a fire fighting truck for forest and building fires. (See FIREMEN for February, 1949). Chief Weiler has improved his equipment by adding another truck chassis carrying a portable pump, 250 ft. of 1½-in. hose, and fire fighting tools for 15 men. He hopes that he is "making a good job of it," but would like to have his apparatus radio equipped.

Roscommon Demonstration

REPRESENTATIVES of conservation departments and forest service officials from Minnesota, Wisconsin, Illinois, Ohio, Indiana, Missouri, and Michigan recently watched a demonstration of forest fire fighting equipment under the direction of Gilbert J. Stewart, director of the Forest Fire Experiment Station, Roscommon, Michigan.

Fire fighting equipment demonstrated included furrowing plows on crawler-type tractors, four-wheel drive trucks and jeeps. Low pressure water streams, foam, and brush cutting with a portable power scythe were also tested.

This jeep was armed with a converted Monroe furrowing plow and had a 75-gallon tank of water and a low-pressure pump.

This Dodge 4-wheel-drive truck pulled a plow that turned a 4-foot furrow. The truck also had a John Bean high-pressure pump powered by a Wisconsin engine and supplied from a 250-gallon water tank.

Good Stop

(*Continued from page 13*)

of 2½-in. hose, 200 feet of 1½-in. hose, 200 gallons of water and a booster reel, connected to the hydrant at Wall and Vermont Place. A line was connected to Engine 1, a 2½-in. line overhauled the rear of the Colonial Inn, and other lines covered exposures.

Engine No. 2 connected to a hydrant on the west side of the involved building where lines operated on exposures, checked grass fires, operated on the main fire and scrap pile, and finally ended in supplying water for lines used in overhauling.

These pumpers, all radio equipped, operated for 18 hours. A number of volunteer fire fighters aided the members of the Bend Fire Department throughout the operation. Several fire fighters were temporarily incapacitated from the heavy smoke.

There was an excellent water supply from 10-in. and 14-in. mains. Valves were opened on an 18-in. main from a reservoir to the city system and hydrant pressure was maintained at 60 pounds throughout the fire. Engines operated at 120 pounds and frequent checking revealed residual pressures varying from 30 to 60 pounds.

The fire completely gutted the unsprinklered 60 by 300-ft. masonry and frame joisted building that housed a pine manufacturing concern. The plant was a total loss as was the building used for storage of paint, lacquer, and thinner. The Kingcraft building was damaged as was the property of the Pacific Power and Light Company. Frame exposures on both sides of the ruined building suffered damage from the intense heat.

Initial estimate of the total loss was in the vicinity of $105,000. The area of the factory building, the nature of its contents, and its rapid involvement presented a serious exposure problem, particularly to the north where two large frame wholesale grocery warehouses were endangered and would have undoubtedly become involved had not the flames been checked in the Kingcraft plant. The tall frame inn on the east would have greatly compl cated the situation had it become involved. Spread of the flames in either direction could have resulted in a blaze of conflagration proportions.

MODERNIZE YOUR EQUIPMENT—INCREASE FIRE-KILLING POWER —AT TOTAL COST OF JUST $60

Recent developments in equipment have made many fire trucks old fashioned. For today a truck can battle—and beat—fires that were much too tough not many years back. Big flammable liquid fires, for instance. Spill fires. And fires covering a wide area.

What's more, trucks can multiply the effectiveness of the present capacity of their water tanks when they must go beyond the range of regular water supply. Now they can "stretch" what's in the tank. With 100 gallons of water, they can produce as much as 1,750 gallons of fire-extinguishing agent.

If your trucks don't measure up to these specifications, your department isn't able to do as efficient a job as it *could* do.

You need to *modernize*. And you can—for the record low price of just $60 a truck!

Multiply your fire-fighting effectiveness with Air Foam Playpipes!

This great advance in the science of fire fighting is the result of the invention of *air foam*. Imagine this—with one gallon of Pyrene* Air Foam Compound and 20 gallons of water, you can produce 350 gallons of fast-acting, sure-killing air foam. And you can do it *instantly*—with no complicated apparatus, no difficult operating tricks. You simply connect the Pyrene Air Foam Playpipe to a hose line. The playpipe automatically mixes foam compound and water to produce huge quantities of air foam. You discharge it from the playpipe just as easily as water from a regular hose nozzle—and from a safe distance. With a flick of your hand, you can make the playpipe discharge plain water instead of foam. One man can operate the playpipe by himself—anywhere your hose lines can go.

Think what this means! With a 100 gallon water tank and only 6 gallons of Pyrene Air Foam Compound, *you can produce 1,750 gallons of air foam*—even though there's no way for you to get another single gallon of water. Where you are working directly from a hydrant or suction, you can continue to make foam indefinitely. And air foam fully equips you to fight flammable liquid fires, as well as those in ordinary combustibles. Pyrene Air Foam puts them out quickly, positively—and keeps them out. Coats and insulates nearby property against spread of fire, too. It will step up enormously the fire-killing power of every truck you have.

$60 brings you complete Pyrene Air Foam Equipment— nothing more to buy

Don't think that air foam is a brand-new, untried idea. Far from it. It has proved its worth in war and peace. It is extensively used by the Armed Forces. Right now it's doing a big job for thousands of fire companies everywhere. Many say they don't know how they ever got along without it!

You can have complete confidence in this equipment, because it was developed and is being produced by Pyrene, acknowledged leader in the fire-extinguishing field. It will do for you everything we say it will. Compared to what it gives you, the cost is trifling. You can have a Pyrene Air Foam Playpipe, pickup tube, hose adapter and four gallons of foam compound for just $60. That's all you need! Nothing to replace except the foam compound. No installation. Your $60 takes care of everything!

See the playpipe for yourself!

Your department owes it to itself to inspect this remarkable equipment—to ask questions about it. Send the coupon, and we'll see that you can do all these things, and with no obligation to buy whatsoever. Don't wait—send the coupon now!

*T.M. Reg. U.S. Pat. Off.

Pyrene AIR FOAM

PYRENE MANUFACTURING CO.

(Affiliated with C-O-Two Fire Equipment Co.)

587 Belmont Ave., Newark 8, New Jersey

Yes, we'd like to see how the Pyrene Air Foam Playpipe can multiply the effectiveness of our fire-fighting equipment for just $60. I understand we are under no obligation whatsoever to buy. Have someone come around to our firehouse on _____ (date) at _____ (time).

We're convinced! Send us _____ sets of model PP14 Pyrene Playpipes, Foam Compound, pickup tube, hose adapter—all @ $60 a set. Our hose thread size is _____.

My name _____

Name of our department _____

Department address _____

City or town _____ State _____

My position _____

Accomplishments in the Province of Ontario

AS has been previously reported in FIREMEN, the fire service of the Province of Ontario operates under a "Fire Departments Act," which governs the working conditions of the fire fighters in the Province.

Provincial Fire Marshal W. J. Scott (member NFPA) reports the accomplishments resulting from this legislation during the past 7 years. In 1944, there were under 2,000 full time firemen in the Province working an average of more than 72 hours a week and receiving an annual salary averaging $1,850. There are now more than 3,000 full-time firemen on either a 48-hour or 56-hour week receiving an average salary of over $3,100. All paid fire departments are required by law to have pension plans and come under the Workmen's Compensation Act, and volunteers are covered at a wage scale of $3,000 per year for compensation. The Fire Department Act was extended to include a system of cash grants which this year alone amount to two million dollars.

Your organization can give even greater service by providing your community with needed ambulance or rescue car protection. Many organizations have done so in recent months by obtaining one of our reconditioned ambulances or funeral cars.

These cars are in fine mechanical and body condition but are for sale at only $600 and up because they have been outmoded by new car styling.

The chassis makes are Buick, Packard and Cadillac, specially constructed for heavy duty work. They provide room for cutting torches, hydraulic jacks, oxygen, and other needed equipment for regular ambulance-rescue service.

The combined skills of the members of your fire department can be used to add innovations to these cars, such as reworking the rear compartment to make an open decked unit, repainting in your colors, and adding other accessories designed for your particular community use.

Our nation-wide sales organization will promptly answer your request for descriptions and prices of cars located close to you, at no obligation. Investigate this opportunity while the selection is still good; write today to The Flxible Company, Loudonville, Ohio, U.S.A.

Flxible
FUNERAL CARS
AND AMBULANCES

THE FLXIBLE COMPANY — LOUDONVILLE — OHIO

Exploding Steel Columns

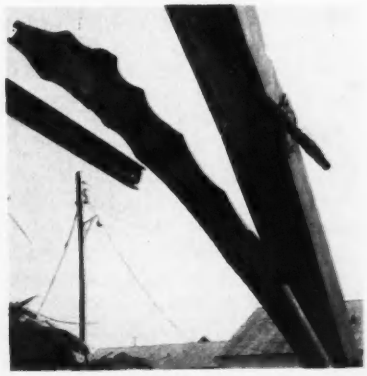
CHIEF Henry R. Chase, Miami, Florida, (member NFPA committees on Firemen's Training and Fire Department Equipment) reports that at several large fires during recent years his men have been startled by violent explosions of concrete-filled steel or iron columns. Photos on this page show several columns rent by such explosions at the General Mills Warehouse fire in Miami last winter.

Chief Chase further comments:

"During one of our fires a couple of years ago, there were two of these columns that exploded and blew holes through concrete blocks big enough for a man to crawl through and if the direction of the explosion had been such as to throw this towards a man or men, there would have been certain death."

Further inquiry indicates that these columns were manufactured locally. Apparently the pent-up steam, generated during serious fires because of the moisture in the concrete, provided sufficient pressure to rupture the columns.

The concrete used in approved structural columns, such as genuine "Lally Columns" is said to be dried



at least four weeks before the columns are capped. In addition, vents are provided to relieve any internal pressure that may result from heating above the boiling point of water.

According to the NFPA Handbook of Fire Protection, certain concrete filled steel columns have a useful fire resistance period of 25 minutes (under standard time-temperature tests) and columns having concrete reinforced with structural shapes have 45 minutes of useful fire resistance.

St. Louis Fire Department

(Continued from page 6)

There are 43 engine and 23 ladder companies in the St. Louis Fire Department in addition to numerous special duty units such as monitor wagons, water towers, and rescue squads. Having 66 first line fire companies carrying out such thorough continuous fire inspections greatly increases the effectiveness of the City's fire prevention program. Pertinent data from the detailed inspection reports are recorded on cards (shown on previous page). These can be carried on fire apparatus to give fire ground officers information about any premises that has been inspected. Also, if necessary, officers can request by radio the full data available in the complete inspection reports.

Obviously, where fire fighting is conducted by persons who have made a careful inspection and detailed report covering the property involved, the department benefits from a familiarity with the premises that could be obtained in no other way. Incidentally, during approximately the past year, recommendations of the Fire Prevention Bureau have resulted in some 450 new installations of automatic sprinklers in St. Louis. It is confidently expected that over a period of time these sprinkler installations will considerably reduce the number of major fires which the department must fight, making it possible to devote even more time and effort to improved pre-fire planning and fire prevention techniques to the benefit of both the fire fighters and the public they protect.

NFPA Inspection Manual
336 pp. $3.00 per copy
National Fire Protection Association
60 Batterymarch Street, Boston 10, Mass.

ASK ANY QUALIFIED AND IMPARTIAL AUTHORITY . . . HE'LL TELL YOU . . .

YOUR *BEST* PROTECTION
FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

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DRY CHEMICAL
FIRE EXTINGUISHING EQUIPMENT

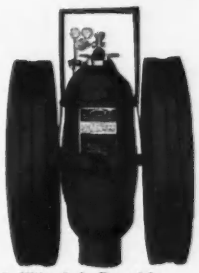
You, who have seen or used an Ansul Dry Chemical Extinguisher at a fire demonstration or on an actual fire, quickly recognized its superior fire-fighting capabilities. Further investigation proves that Ansul "Water-tight Construction" provides greater dependability under severe exposure conditions.

Ansul Hand Portable Models — 4, 4-B, 20-B and 30-B.

Fire Chiefs, insurance inspectors, safety engineers, etc. recognize Ansul as the leader in the dry chemical extinguisher field. Ansul Fire Extinguishing Equipment and *"PLUS-FIFTY"* Dry Chemical have set unparalleled standards of quality for the fire extinguisher industry.

You get *complete* dry chemical fire protection only from Ansul. There is an Ansul Dry Chemical Fire Extinguisher of the proper size for almost every flammable liquid, gas and electrical fire hazard.

Safeguard your plant and irreplaceable equipment with the *BEST* fire extinguishing equipment available. Protect them with ANSUL EXTINGUISHERS.



Ansul Wheeled Portable Models — 150-A and 350-A.

ANSUL EXCLUSIVE FEATURES

- Patented Nozzle assures most effective stream pattern . . . Best results by inexperienced operators.
- Special packings in Nozzle and other parts exclude water.
- Corrosion resistant construction throughout.
- Easy on-the-spot Recharging (No tools needed).
- Quick, *positive* puncture operation.
- Special guard protects cartridge . . . rugged construction throughout.
- Ansul *"PLUS-FIFTY"*® Dry Chemical used exclusively.
- Field tested by thousands of satisfied customers.
- Ansul LT Models are the only dry chemical extinguishers listed by U.L. for operation at –65° F.

Ansul Piped Systems and Stationary Units.

Send for File No. 703. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.

Ansul Mobile Units—Mine Cars, Trailers, Jeep Equipped and Fire Trucks.

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CHEMICAL COMPANY
Fire Extinguisher Division
MARINETTE • WISCONSIN

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One siren can be heard above all others, in fact all traffic noises . . . it's the Federal Q -- the newest, greatest siren ever developed! See any siren on the market . . . the Q is the best!

You get greater sound output, greater penetration and longer coasting than with any other siren in the emergency vehicle field.

Assure your vehicles of the finest sound protection available. Specify the Federal Q siren. Write for bulletin 301 today!

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The improved Powhatan "Sensible-Lug Couplings" are precision tooled and manufactured of only the best high grade materials. They set a standard that is "tops" in this specialized field of fire-fighting equipment. The curved surfaces of this modern coupling enable the hose to glide easily over all obstructions, thus preventing snagging, an important safety and economical feature appreciated by those who know.

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Membership Report

THE September issue of FIREMEN was sent to every fire department in the United States and Canada as a means of promoting NFPA Fire Department Membership. If the pattern of previous years holds true, the coming months should bring a noticeable increase.

In January, 1951, the distribution of FIREMEN was changed to provide six free subscriptions to FIREMEN to every member fire department or member chief of a fire department. This means that six subscriptions to the magazine are included with every $12.50 membership. In addition, each member department may purchase as many additional subscriptions at $1.25 per year as desired.

In January, 1951, NFPA Fire Department Membership was 1,357 fire departments and 20,438 men. At present it is 1,567 fire departments and 20,419 men. This shows that although the number of individuals receiving FIREMEN has changed very slightly, nevertheless FIREMEN and other NFPA publications are reaching more than 200 more fire departments than at the first of 1951. This indicates that a wider distribution of NFPA publications is being effected.

NFPA Welcomes:

California: Corona Fire Department, Corona; Culver City Fire Department, Culver City.

Illinois: Columbus Manor Fire Department, Oak Lawn.

Maryland: U. S. Naval Training Center, Bainbridge.

Michigan: DeTour Volunteer Fire Department, DeTour.

New Jersey: Hope Fire Company No. 1, Incorporated, Allentown.

Ohio: Franklin Township Fire Department, Columbus.

Oregon: Junction City Fire Department, Junction City.

Texas: Olton, Volunteer Fire Department, Olton.

Wisconsin: Kewaskum Fire Department, Kewaskum; Chief John Pavlik, West Milwaukee.

Japan: Chief Takao Shioya, Tokyo Fire Department, Tokyo.

AKRON Multiversal Portable DELUGE NOZZLE

TURNS IN A COMPLETE CIRCLE

A Complete Fire Fighting Necessity of Maximum Capacity and Flexibility

- Greater stream range and projection.
- Complete circular rotation—and 90° elevation swing.
- Self sustaining. Once placed in position and under pressure, needs no further attention.
- Conserves manpower. One man with a 3-hose-line Multiversal Deluge Nozzle is equal to 6 men with 3 separate hose lines.
- Furnished with 3 or 4 inlets.
- Either hand wheel or lever control.

They Deserve the Best . . . AKRON BRASS!

GREATER STREAM RANGE AND PROJECTION

AKRON BRASS MFG. COMPANY, INC.
WOOSTER, OHIO

AKRON BRASS
FIRE FIGHTING EQUIPMENT

CAIRNS

REGULATION

HELMETS

"NEW YORKER"

(Leather—No. 5A)

No other helmet made has ever shown the rugged stand-up-ability of this "pioneer" of all "regulation" helmets — which explains why it is first choice in the largest departments, where the duty is hardest.

"SENATOR"

(Aluminum—No. 350)

Where the preference is for aluminum, here is a rugged one-piece "regulation" helmet that is light, durable, safe and comfortable — and largely used by both regulars and volunteers, the country over.

"CLIFTON"

(Plastic—No. 900)

"Regulation" in every line, this latest Cairns Helmet is made of "Flintflex" — a light, tough, flexible material that gives complete protection against impact, heat, electric current and chemicals.

Write for Catalog 330

CAIRNS & BROTHER

(ALLWOOD), CLIFTON, N. J.

Outfitters to Firemen Since 1836

Charlottetown, Prince Edward Island, August 18

A MECHANIC working in a garage grease pit had placed two full cans of gasoline on the floor of the pit and was engaged in removing the gasoline tank of a truck. A trouble lamp on an extension cord fell to the floor and broke, igniting the gasoline and a flash fire resulted. The mechanic was rescued with slight burns.

The fire demolished four buildings of frame construction adjoining the garage, and damaged three other buildings of other type of construction.

The Charlottetown Fire Department responded with 3 engine companies and a ladder truck. The fire had a rapid spread, however, and before it could be brought under control damage amounted to more than $300,000.

Standishall Hotel, Hull, Quebec, August 13

FIRE is believed to have started in a basement room of this 3-story building which housed a dance hall, a hotel, and a night club.

Seven minutes before the alarm was transmitted the electrical service failed and it was assumed that there was a short circuit on the panels where 220-volt and 550-volt circuits entered the building.

The Hull Fire Department responded with 5 engine companies and 2 ladder companies. Twelve hose streams, including 4900 feet of 2½-in. hose and 350 feet of 1½-in. hose, and a standpipe connection were utilized. One person lost his life and four others suffered injury. Initial estimates placed total damage at about $200,000.

When you have to go into action *FAST*

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FIRE PUMPS

Civilian Defense Heads INDIAN FIRE PUMPS to protect Communities from Fire Bombs. Write us now. Be prepared!

Speed up your fire fighting with the world famous INDIAN FIRE PUMPS which put fires out as fast as a man can walk. Pump throws 30 to 40 ft. pressure stream or nozzle instantly adjusts to strong spray.

Smith INDIAN Backfiring Drip Torch

Widely used for slash disposal, burning right of way, etc. 1 gal. tank. Brass feed pipe. Strong construction. Designed for fire dept. backfiring work.

Smith INDIAN Drinking Water & Supply Tank

For carrying drinking water to fire fighting crews, and refilling Indian Fire Pumps. 5-gal. capacity. Push button faucet. Carries by handle or slung on back.

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What's New in Fire Equipment?

New Brochure on Leece-Neville

A new, 24-page, well illustrated brochure on the company and its products has just been published by The Leece-Neville Co., Cleveland 14, Ohio, manufacturers of the ALTERNATOR SYSTEM to insure dependable electrical supply in motor vehicles for operation of mobile radios, battery charging, lights, siren and other accessories. Company states that copies will be mailed free to interested persons.

GEYSER
DELUGE
DECK PIPES

FOR
HIGH VELOCITY
HIGH GPM
INSTALLATIONS

Mount on apparatus or install wherever permanent fire protection is needed. Ideal for lumber yards, stock yards, industrial plants, docks, etc.

Geyser Deluge Deck Pumps have a full horizontal sweep of 360°, and a vertical range of 10° below and 60° above horizontal. Bronze ball bearing movement — locks in any position. Direct threaded or bolt type flange bases available.

Tips are straight bored for maximum distance and stream efficiency — 1½", 1¾" or 2" discharge tips furnished as standard.

Contact your Wooster Brass Representative or write direct

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THE WOOSTER BRASS COMPANY
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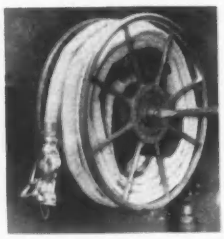
Manufacturers of a Complete Line of Distinctive Fire Fighting Equipment



"Instant-Flo" Expansible Hose Reel

A hose reel that expands when water flows into the hose is featured by the American Fire Fighters, Incorporated, P.O. Box 159, Back Bay Station, Boston, Massachusetts. Designed for standpipe or yard hydrant use, the unit shown above has 50 ft. of 1½ in. linen or cotton rubber-lined hose with a Rockwood "Water FOG" nozzle and Type M Ball Valve. The "Instant-Flo" reel is the only expansible hose reel listed by Underwriters Laboratories, Incorporated.

●

General Truck Sales Company Buys Ahrens-Fox Branch

General Truck Sales Company, Cincinnati, Ohio, recently purchased the Ahrens-Fox Fire Engine Division of Norwood, Ohio. Plans have been made to expand the custom built apparatus operations of Ahrens-Fox Company to include the manufacture of fire apparatus for use on commercial truck chassis.

●

W. S. Darley & Company Has New Catalog

The new No. 146 Fire Equipment Catalog of W. S. Darley & Company, 2810 Washington Boulevard, Chicago, Illinois, is available to fire chiefs, other fire officials, and members of fire departments. The publication has 108 pages, 1100 items, and 750 illustrations and may be obtained by writing to the manufacturer at the above address.

New Bulletin on Mechanical Foam

A new liquid type mechanical foam, AER-O-Foam "99," for extinguishing polar solvent or petroleum product fires is described in detail in a new bulletin published by National Foam System, Incorporated, West Chester, Pennsylvania. The bulletin describes the protection offered by the product when applied to fires fueled by methyl, ethyl, isopropyl alcohols, esters, ketones, and ethers. The foam is also effective on petroleum products fires and was developed after extensive research at the manufacturer's testing grounds in accordance with NBFU standards.

●

Randolph Laboratories Publishes Extinguisher Guide

A new 12 x 22 in. poster to inform employees on the types and correct applications of fire extinguishers has been published by Randolph Laboratories, Incorporated, 8 East Kinzie Street, Chicago, Illinois. The guide will be useful for posting in industrial plants. For quantity copies write to the manufacturer at the above address.

HOWE Fire Truck Equipment Meeting Every Service Since 1872
Centrifugal, Rotary, and Piston Pumps supplied
HOWE FIRE APPARATUS COMPANY, 1406 West 22nd Street, Anderson, Indiana

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Thoroughly up-to-date in every respect, eight branch stores of Franklin Simon, one of New York's leading specialty shops, are protected against fire and burglary by ADT Central Station AUTOMATIC Protection Services. The services include: ADT Central Station Burglar Alarm, ADT Sprinkler Supervisory and Waterflow Alarm and Aero Automatic Fire Alarm Services. These and other ADT AUTOMATIC Services are used by thousands of business concerns throughout the United States for better protection at lower cost.

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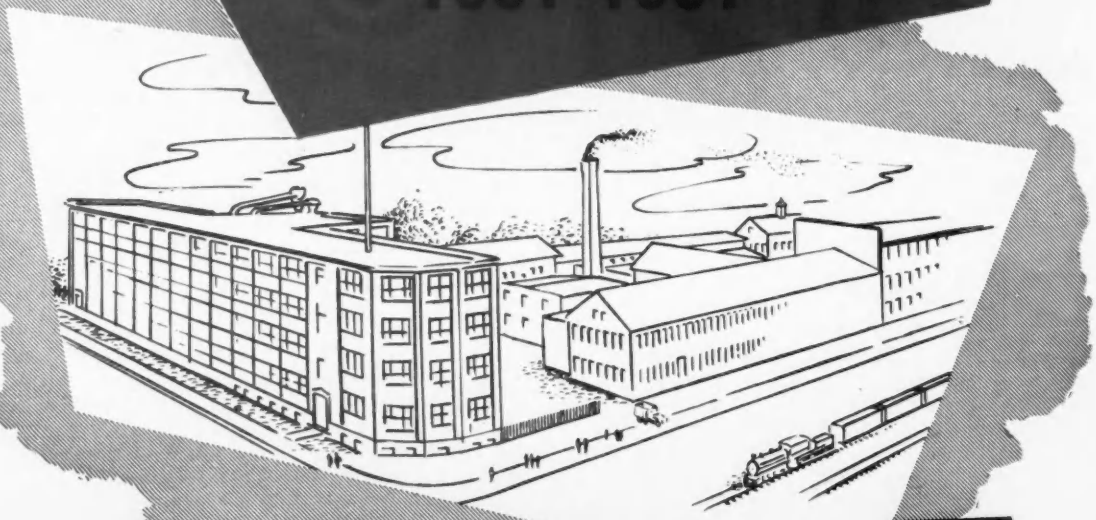

During 1851, in the City of Boston, Massachusetts, was made the first practical application of the Morse telegraph to fire signaling, providing a public and always accessible means for calling the fire department. John N. Gamewell shortly thereafter, acquired patent rights for the system of fire signaling thus applied in Boston and which has since become universally known as The Gamewell Fire Alarm System.

The well estabished reputation for reliability, durability, and efficiency of Gamewell equipment, produced by a small force of highly skilled workmen, has resulted in the widespread use of The Gamewell System not only in the U. S. A. but also in many other countries.

The Gamewell Company, lineal successor to John N. Gamewell, deeply appreciates the widespread confidence in its products and will continue to incorporate therein features dictated by 100 years experience that are essential to the protection of life and property.

The GAMEWELL COMPANY

NEWTON UPPER FALLS 64, MASSACHUSETTS

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in FIRE FIGHTING...and in FIRE APPARATUS

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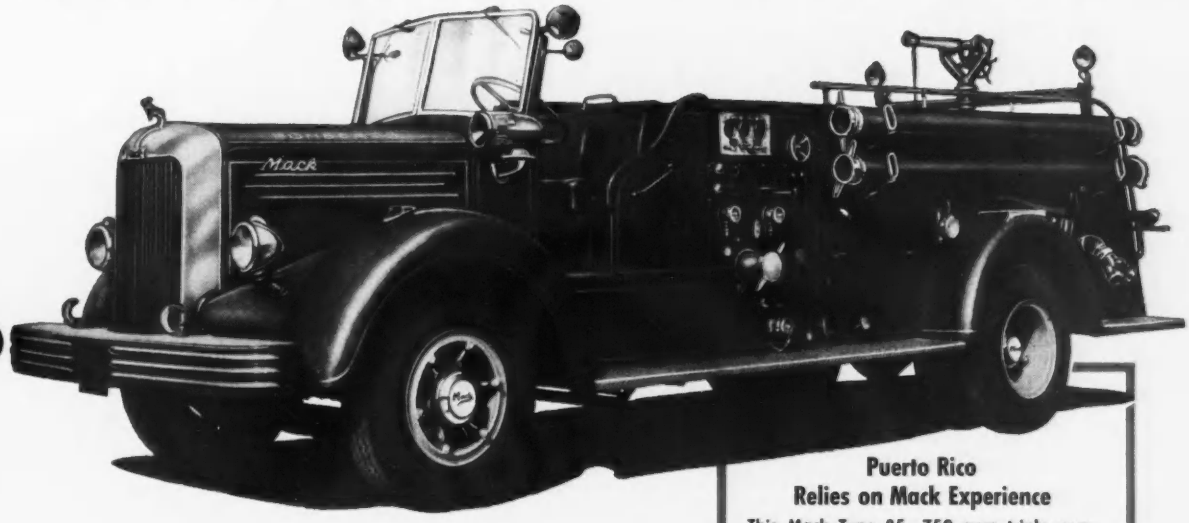

Puerto Rico Relies on Mack Experience

This Mack Type 85, 750 gpm triple combination pumper is proving to be a dependable addition to the Insular Fire Service of Puerto Rico. At home and abroad, Mack maintains an enviable reputation for the finest fire apparatus in the world.

Experience is invaluable in fighting fires — and in the manufacture of fire apparatus too! That's why it's so important to consider thoroughly each manufacturer's record and reputation before purchasing new apparatus.

For instance, every modern Mack is backed by over 40 years of uninterrupted fire apparatus manufacture. And through these years, Mack pioneered many modern advances — from the two-stage, series-parallel centrifugal pump to water-carrying pumpers. Performance leadership has been the constant result.

Moreover, the years have steadily increased the Mack reputation — for *dependability* that means unfailing response to alarms — for *stamina* to stand up under hours and years of the severest operation — and for its nation-wide network for service and parts.

It will pay you to compare the background as well as present product and facilities of each apparatus manufacturer. That's the best way for *you* — these days more than ever — and the way that will lead you to Mack.

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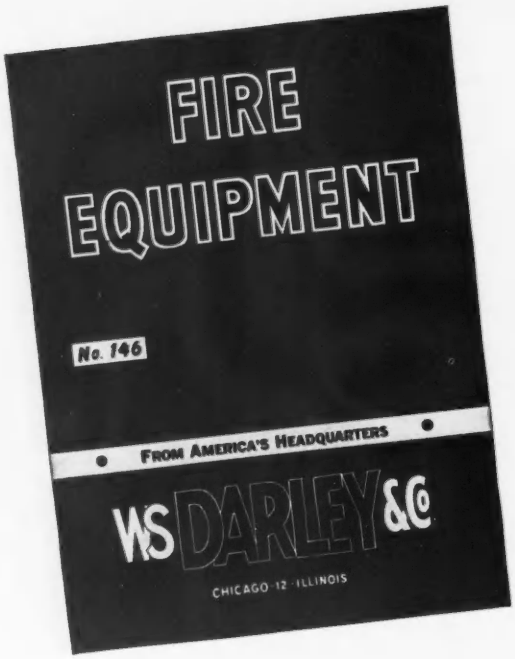

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